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HUMAN PROBLEMS
IN
BRITISH CENTRAL AFRICA

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HUMAN PROBLEMS
IN
BRITISH CENTRAL AFRICA

XXVII

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Human Problems in British Central Africa

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This Journal, published half-yearly in June and December, aims to define simply, but with scientific accuracy, the social problems facing man in Central Africa, to record what is known of such problems and to report on research being undertaken and required in the future.

Contributions are not confined to research by the Institute's past and present staff: articles and notes are welcome from all those working in the field covered, or those engaged on similar problems elsewhere whose findings are applicable to the Central African field.

The standard length of articles is in the region of 10,000 words, but longer or shorter articles will be considered from time to time. Articles should be accompanied by summaries of 100-200 words.

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Contributors to this Issue

Dr. David G. Bettison was born and schooled in England, but proceeded through B.A. to M.A. and Ph.D. at Rhodes University, Grahamstown. He had experience in South Africa as a welfare worker and as director of a Tuberculosis Settlement. He joined the Institute in January 1957 and worked mainly in Nyasaland and Lusaka. Arising out of this work he has already published a series of Rhodes-Livingstone Communications: Nos. 9, 11, 12, 16 and (jointly) No. 17. He is now senior lecturer in sociology at the University of Queensland, Brisbane, Australia.

Dr. Thayer Scudder took his B.A. at Harvard in 1952 in Anthropology and thereafter worked for a year with the U.S. Quartermaster Corps as an environmental technologist. After a year at Yale on a specialist course in African geography and two more years at Harvard he joined the Institute's Valley Tonga scheme, under Professor Elizabeth Colson, and spent the period September 1956 to September 1957 in the field. The book arising from this work is currently with the printers, as also is Dr. Colson's. He obtained his Ph.D. at Harvard in June this year.

Dr. Charles Frantz gained his Ph.D. at Chicago University with a thesis on the Dukhabors, and then proceeded to a teaching post at Portland State College. He spent from September 1958 to April 1960 in Central Africa, under the auspices of the African Program of the University of Chicago, working in association with Dr. Cyril Rogers of the University College of Rhodesia and Nyasaland.

THE POVERTY DATUM LINE IN CENTRAL AFRICA

Comparative material from Northern Rhodesia, Southern Rhodesia
and Nyasaland

by

DAVID G. BETTISON

*Lately Senior Research Officer,
Rhodes-Livingstone Institute*

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FOREWORD

THERE has recently been much talk at international level throughout Africa of the need for co-ordinated research leading to the presentation of truly comparative data. A series of requests for the services of this Institute makes it possible to present an essay in comparative analysis which, though the precise circumstances are unlikely to be repeated, may give a lead to the collection and presentation of comparative sociological material in the African setting.

In the first place the Government of Nyasaland asked the Institute to undertake work in the urban and peri-urban areas of Blantyre-Limbe with a view to ascertaining the social and economic situation of the African population and to studying the inter-relation between town and country in the prevailing conditions of the area. The Institute was happily in a position to offer the services of Dr. Bettison for this work. He took up residence for six months in the area, January to June 1957, during which time he built up and trained a team of research assistants, some from the permanent African staff of the Institute and some local recruits: as team leader he was fortunate to recruit a local resident, Miss Valerie Ellis, B.Soc.Sc., Rhodes University. From mid '57 to mid '59 this team continued to function under the guidance of Dr. Bettison, who was based in Lusaka but able frequently to visit Blantyre, whilst at the same time conducting his Lusaka enquiries and at times visiting Salisbury. Dr. Apthorpe, at that time Research Secretary at the Institute's Headquarters, visited Nyasaland on one occasion in connection with the work going on, whilst Mr. P. Rigby was employed for some months in 1959 assisting in the analysis of the material at Lusaka.

The first phase of the Blantyre-Limbe research was a demographic appraisal of the situation published as *The Demographic Structure of Seventeen Villages in the Peri-urban Area of Blantyre-Limbe, Nyasaland*, by David Bettison (Rhodes-Livingstone Institute Communication No. 11). This was followed by a parallel publication *The Social and Economic Structure of Seventeen Villages, Blantyre-Limbe, Nyasaland* by the same author (Rhodes-Livingstone Institute Communication No. 12). Though as their titles indicate, both these publications covered the peri-urban area, work in the town had not been neglected and valuable comparative material appeared in *Cash Wages and Occupational Structure, Blantyre-Limbe, Nyasaland*, again by the same author (Communication No. 9). Team members assisted in the production of the next publication *Further Economic and Social Studies, Blantyre-Limbe, Nyasaland* (Communication No. 17), A. A. Nyirenda contributing an essay

on *Markets and Price Fixing in Blantyre-Limbe*, H. D. Ngwane *Some Aspects of Marriage in Peri-Urban Villages, Blantyre-Limbe* and Dr. Bettison *Price Changes in African Markets, Blantyre-Limbe*. Two further publications are in course of preparation. Firstly an analysis of some aspects of the present day social structure of Ndirande, a peri-urban area of Blantyre-Limbe, by Dr. Bettison and Dr. Apthorpe, who was able to carry out a brief period of fieldwork in that area as a social anthropologist. The second paper is an analysis of income and expenditure patterns in Blantyre-Limbe, to be published in the Institute's series of Communications by Dr. Bettison and Mr. P. J. A. Rigby, the latter being responsible for part of the write-up of research carried out in the field by the team. Both these will fill out the social and economic picture against which the bare P. D. L. study must be set if its implications are to be appreciated.

The Salisbury work was a short *ad hoc* enquiry conducted at the request of the Southern Rhodesia Government in connection with the Plewman Commission. Six weeks were devoted to a concentrated study of the Poverty Datum Line in Salisbury: some results arising therefrom are to be found in *The Report of the Urban African Affairs Commission 1958* (Government Printer, Salisbury). Further material, now published for the first time, appears in this article.

The third prong of this threefold attack to discover the Poverty Datum Line was directed at Lusaka, where the Northern Rhodesia African Housing Board, a statutory body established by the Government, requested survey work with a view to revealing such practical issues as rate of urban growth, housing preferences, economic differentials, capacity to pay rent and so on. Dr. Bettison, based in Lusaka and working with the Institute African staff, some of whom had been engaged for a time on work both in Salisbury and Blantyre-Limbe, devoted a considerable proportion of his time to this work from July 1957 till his departure in July 1959. Thereafter the Institute staff continued with the analysis of the material and of its publication. The factual data is to be found in Rhodes-Livingstone Institute Communication No. 16, *Numerical Data on African Dwellers in Lusaka, Northern Rhodesia*, by David Bettison, published in February 1960.

This impressive list of publications will show how every effort has been made to make the information gained from these surveys available at the earliest possible moment. But there is an inevitable time-lag in publication, so that the picture as presented can never be fully up to date. For example, whilst the surveys were being conducted and written up a new factor was introduced into the situation the result of which could not be incorporated into the material: I refer to the statutory raising by the Nyasaland Government in July 1957 of the minimum wage in the Blantyre-Limbe area from Sh. 1/4 to Sh. 2/- per day. A subsequent rise was ordered in August 1959 to Sh. 2/6. Whilst at first sight this action gives an

apparent rise in wages of 87½ per cent in two years, survey work has not been possible to show what rise if any has occurred in the price of the workers' necessities of life. Nor is it known what other adjustments have occurred meanwhile in such matters as free rations, free housing, bonus and overtime payments or other privileges. Therefore the change in *real* wages cannot be assessed without further research.

The present paper is a comparative study of particular value in that it brings together the results of research conducted under the supervision of one worker, by a team of uniform training, following the same methods in three widely separated towns, with very divergent economies, one in each of the constituent territories of the Central African Federation.

One point clearly illustrated in Fig. 1 will immediately strike the reader and that is that the average wage is in each case well below the cost of goods and services required to keep a family in health and decency. What is more striking is that the percentage shortfall is reasonably consistent throughout, revealing the fact that the circumstances bringing this about are general and not unique to any one territory. In fact the comparison might have been presented on a wider basis. Dr. Bettison quotes the Durban P.D.L. figure but was unable to ascertain the corresponding wage rate. In a study by Olive Gibson, conducted in Johannesburg in 1954, published by the South African Institute of Race Relations, both income and expenditure are set out for various groups of employees. Whilst there is danger in over-simplification and generalization, the summarized findings set out hereunder are of interest:

MONTHLY EXPENDITURE AND INCOME OF AN
AFRICAN FAMILY IN JOHANNESBURG

Expenditure	£	s.	d.	Income	£	s.	d.
Food for five	14	8	4	Man's wages	11	8	11
Rent	2	0	0	Wife's contribution . .	3	10	0
Fuel		19	3	Children's earnings . .	1	0	0
Cleaning materials . .		12	8				
Fares		13	4				
Clothing	4	0	0				
	22	13	7		15	18	11
				£	s.	d.	
Expenditure				22	13	7	
Less Income				15	18	11	
Deficit				6	14	8	

If nothing else, this shows that the situation as revealed by Dr. Bettison is not unique to Central Africa: the South African deficit is in fact greater than that found in any one of the three Central African territories.

Thus the reasons for this general shortfall of wages below requirements are not to be sought in the prevailing conditions in any one territory: they must be sought in the conditions which prevail throughout the area. In a further paper to be published shortly, entitled *Factors in the Determination of Wage Rates in Central Africa*, Dr. Bettison sets out to answer the questions which these studies brought so forcibly to his attention 'Why should African wage rates be as low, relative to the goods and services they can command, as they have been found to be?'

One final point of explanation: the agencies which commissioned the research here referred to have seen this material in draft and have offered certain comments, a number of which have been incorporated in the final article. Nevertheless, the results are entirely the author's responsibility and are not to be regarded as official statistics. There are in fact certain points on which Dr. Bettison and the statisticians did not see eye-to-eye. To the non-statistician, however, it seems of minor significance whether, for example, the variation in calorie requirements according to altitude has been sufficiently considered, when it is so apparent that in all three territories the family man's income falls so far below his requirements. How much less must these methodological refinements appeal to the subject himself—the African worker struggling to bring up a family on a manifestly inadequate wage. However, if he were aware of the work that has been put in on his behalf by the agencies which commissioned the research, by Dr. Bettison and the Institute team, and by all those whose assistance has made this series of publications possible, he should indeed be grateful.

H. A. FOSBROOK

*Director
Rhodes-Livingstone Institute*

INTRODUCTION

During 1957 and 1958 the Rhodes-Livingstone Institute was invited to make certain socio-economic studies in Northern and Southern Rhodesia and Nyasaland. One common feature of these studies was the calculation of the cost of living at a minimum standard of health and decency. Consequently it became possible to equate current wage rates in each territory with the cost of the minimum standard.

These studies revealed the existence in certain households of considerable adverse difference between costs at a minimum standard and income from wages. The same phenomenon has appeared in similar studies in the Union of South Africa (Batson, 1941), in the East African territories (Carpenter Report, 1954, para. 94), and in the literature at the end of the last century in Britain (Booth and Rowntree). This wide distribution has a significance of its own.

The phenomenon is clearly not the making of any one single government, nor does it reflect a dereliction of duty on the part of any official. Rather must it be viewed as the outcome of certain pressures, beliefs and attitudes that appear in a given type of socio-economic system at a particular time in its development.

In the absence of alternative sources of income, the gap between costs at a minimum standard and income from wages will lead to an actual standard of living below that defined as minimum. The question will need to be answered: 'How then does such a person or household actually come out and continue to do so for a considerable number of years?' It is tentatively suggested that increasing rates of pulmonary tuberculosis in Southern Rhodesia, of increasing numbers of under and malnourished children at the out-patients departments of some Northern Rhodesia hospitals, and similar phenomena, are pointers to the fact that many persons living in poverty do not maintain a standard commensurate with the minimum for human needs over a considerable duration of time.

In this study, Poverty means that state of existence where, under conditions of considerable dependence on a wage, the size of the wage received does not permit a household of given size and composition to maintain for long periods of time a standard of consumption commensurate with human needs at a minimum level of health and decency.

The definition of a minimum level of health and decency is a subject requiring considerable attention. As far as possible the minimum level must be ascertained on objective, rather than subjective, grounds. The method used in this study is 'The Poverty Datum Line', abbreviated to P.D.L. In Africa its most notable exponent, and the person who has contributed most to its local adaptation, is Professor Edward Batson of the University of Cape Town.

THE P.D.L. IN BLANTYRE, LUSAKA AND SALISBURY

The Poverty Datum Line indicates the amount of money required for a household of given size and composition to live at a defined minimum level of health and decency. A P.D.L. is not a statement of how a household in a given community—or even the average of households in that community—spends its available money. Such statements could be obtained from family budget analyses. The P.D.L. proceeds from the assumption that it is possible to ascertain the lowest possible cost of supplying the elementary fundamental necessities of life in a given society.

The P.D.L. is most commonly used as a yardstick against which households of given composition and income can be rated as having sufficient to live in relative poverty or affluence. It assumes that the available income is spent to the best possible advantage; also, that man is not merely a biological being requiring given quantities of heat and nourishment to subsist. To some degree at least, the

fact must be accepted that man is a social being and thus obliged to conform to certain norms of conduct. For example, in Central Africa it is quite possible for mankind to live without clothing and only in the most primitive of shelters. Yet it would be unrealistic to determine the P.D.L. on this basis for any of the three towns under discussion. Social life is such that an individual must conform to certain standards of decency or suffer the legal and social consequences.

This requirement introduces an element of arbitrariness into calculation otherwise remarkably objective in its standards and approach. Whenever possible these arbitrary decisions will be stated explicitly.

The P.D.L. customarily takes into consideration expenditure classified under the following heads:

- a. food
- b. clothing
- c. fuel and light
- d. cleaning materials
- e. transport to and from work
- f. an allowance for rent
- g. taxation

These may be considered as the basic requirements of life. Expenditure on sport and recreation, medicines, schooling, etc., are excluded.

It is proposed to treat these headings *seriatim*. Under each heading a reasonable minimum requirement for persons of varying sex and age must be considered as well as the price at which such requirements can be purchased from sources readily accessible to the people concerned. This in itself is not a simple task. An adult man's food requirements, for example, may be stated to be 3,000 calories a day, but such essentials as proteins and vitamins of given quantity must be included in the diet supplying the 3,000 calories. Further, these various dietary components must be procured at the cheapest price available. Thus the cheapest diet is an expression of both nutritive value and price.

Food: This item for the lowest income groups is the most costly of all P.D.L. components and can generally be reckoned at approximately 65 per cent of the total cost for a household with children if rent is excluded from the total. There are a variety of dietary standards which indicate the minimum requirements of a working man and his dependents. The present study uses that laid down by the South African Institute for Medical Research (Fox and Goldberger, 1944). This standard tends to be slightly lower than others.¹ The dietary standard for moderately active men and women and for children is contained in Table 1.

¹ These include the B.M.A. Dietary (1933); Thomson (1954) and Richards and Widdowson (1936).

TABLE 1
Dietary Standard

	<i>Calories</i>	<i>Proteins gm.</i>	<i>Calcium gm.</i>	<i>Iron mg.</i>	<i>Vit. A I.U.</i>	<i>Vit. B mg.</i>	<i>Vit. C mg.</i>
<i>Male, moderately active, weight 154 lb.</i>	3,000	70	0.8	12	3-4,000	2.0	30
<i>Female, mod. active, weight 123 lb.</i>	2,500	60	0.8	12	3-4,000	1.5	30
<i>Child, 1-3 years</i>	1,200	40	0.9	7	1,000	0.5	35
4-6 "	1,600	50	0.9	8	2,500	0.5	50
7-9 "	2,000	60	0.9	10	3,000	1.0	50
10-12 "	2,500	70	1.2	12	3,000	1.0	50

At least 50 and preferably 100 grams of fat should be present.

The calculation of a suitable diet for women, children and the aged, which would provide the nutritive values contained in Table 1, would be arduous. Professor Batson (1944) supplies a list of weights which reflect the proportional cost of supplying a minimum diet to women and children in terms of that of a working male. These are as follows:

<i>Type of Person</i>	<i>Proportionate cost</i>
Male aged 16-64 . . .	100
Male aged 65+ . . .	60
Female aged 16-59 . . .	85
Female aged 60+ . . .	60
Child aged 0-4 . . .	50
Child aged 5-9 . . .	60
Child aged 10-15 . . .	85

The items of food, due to differences in cost, which will provide most cheaply a nutritive standard approaching that contained in Table 1 will vary among the three towns under discussion. The field work undertaken to ascertain prices in Blantyre, Lusaka and Salisbury revealed variations in price among suburbs. Prices varied among European, Asian and African suburbs, as well as among different African suburbs. In consequence it has been necessary to calculate a figure likely to represent prices in the African areas of any town as a whole.

Table 2 contains the diets suggested for an adult male per week for each of the towns. The table also shows the cost of the enumerated items and of the diet as a whole.

TABLE 2

Diet and Cost: Adult Male per Week

Type of Food	Blantyre		Lusaka		Salisbury	
	ounces	pence	ounces	pence	ounces	pence
<i>Animal Foodstuffs</i>						
Dry fish, bones eaten. . .	24.5	15.3	12.3	18.5	—	—
Beef (up to 25% bone) . .	18.7	21.2	24.5	29.5	56.0	56.0
Fresh milk per pint . . .	—	—	—	—	1 pint	7.0
Fresh egg	—	—	—	—	one	3.0
<i>Cereals and Pulse</i>						
Mealie meal	—	—	73.5	15.3	128.0	24.0
Maize grain	50.4	4.3	—	—	—	—
Groundnuts (shelled) . .	24.5	7.9	24.5	14.5	4.0	1.5
Dry beans	—	—	12.3	8.0	8.0	5.0
Cow peas	24.5	4.0	—	—	—	—
Rice	—	—	—	—	8.0	7.0
<i>Starchy Roots</i>						
Fresh cassava	24.5	2.9	24.5	6.0	—	—
Sweet potatoes	50.4	2.8	—	—	—	—
Irish potatoes	—	—	—	—	40.0	25.0
<i>Vegetables and Fruit</i>						
Dry onions	12.0	5.1	12.3	5.0	16.0	5.0
Tomatoes	24.5	3.8	12.3	5.5	16.0	4.0
Spinach and green leaves	—	—	12.3	5.5	—	—
Cabbage	—	—	12.3	4.0	16.0	4.0
Carrots.	12.0	5.1	—	—	—	—
Orange or Guavas or						
Avocados in season . .	24.5	4.0	12.0	4.0	24.5	6.0
<i>Oils and Fats</i>						
Rendered meat fat . . .	12.3	10.9	—	—	—	—
Vegetable oil	—	—	12.3	15.5	4.0	8.0
Margarine	—	—	—	—	4.0	7.0
Sugar	24.5	9.1	28.0	17.0	24.0	12.0
<i>Condiments</i>						
Curry, Tea, Coffee, Salt, etc.		say 14.0		say 14.0		say 14.0
Total Cost		110.4		162.3		188.5

From this it will be seen that the weekly cost of food per working male in the three towns is Blantyre, 9s. 2½d., Lusaka, 13s. 6½d., and Salisbury, 15s. 8½d.

The nutritive value of these diets is approximately as follows (per day):

	Calories	Protein	Calcium	Vit. A	Vit. B	Vit. C
		gm.	gm.	I.U.	mg.	mg.
Salisbury . .	3,100	120	2.3	3,000	2.0	80
Blantyre . .	3,200	135	22	3,750	2.9	130
Lusaka . .	3,100	110	12	3,900	2.4	94

Thus relative to the standard shown in Table 1 the diets are slightly generous in all major items. Sufficient fat and iron are present.

The cost of food per week for the aged, women and children in terms of the weight quoted above is as follows:

	<i>Blantyre</i>		<i>Lusaka</i>		<i>Salisbury</i>	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Male aged 65+ . . .	5	6½	8	1½	9	5
Female aged 60+ . . .	5	6½	8	1½	9	5
Female aged 16-59 . . .	7	10	11	6	13	4
Child aged 0-4 . . .	4	7½	6	9	7	10
Child aged 5-9 . . .	5	6	8	1½	9	5
Child aged 10-15 . . .	7	10	11	6	13	4

Thus the cost of food per week for selected households is:

TABLE 3

Cost of Food per Week for Selected Households

	<i>Blantyre</i>		<i>Lusaka</i>		<i>Salisbury</i>	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Single male 16-64 . . .	9	2½	13	6½	15	8½
Married couple 16-64 . . .	17	0	25	0½	29	0½
Married couple and one child 0-4	21	7½	31	9½	36	10½
Married couple and two children 5-9 and 10-15 . . .	30	4	44	8½	51	9½
Married couple and three children one of each age	34	11½	51	5	59	7½
Aged couple	11	0½	16	3	18	10

The cost of these weekly food allowances may be considered high if compared with calculations by other methods. Considerable attention has been paid this topic by the Southern Rhodesian Government and the Central African Statistical Office. One method is to ascertain the actual diet consumed per man unit and its cost and thereafter to correct any nutritional deficiencies found to exist in the average diet—or the diet of any other statistical group—by the inclusion of additional foodstuffs. The cost of these additional foodstuffs can be determined, and their cost plus the cost of the actual diet would indicate the approximate lowest possible cost per man unit.

The Southern Rhodesian Government undertook this exercise and kindly intimated to me that families with the lowest incomes consumed food to an average value of £1 15s. 3d. per man unit per month. This food was nutritionally inadequate, but the expenditure of an additional 16s. 9d. per man unit per month on food would provide an adequate diet. The total monthly expenditure

on food would be, therefore, £2 12s. The 16s. 9d. added was made up of

	s.	d.
3.0 lb. dried skim milk costing . . .	6	0
2.8 lb. margarine costing . . .	7	6
2.0 lb. groundnuts costing . . .	1	6
0.5 lb. cabbage costing . . .		3
6.0 lb. mealie meal costing . . .	1	6
	<hr/>	<hr/>
	16	9

If the above weights were applied, the monthly cost of food for households of various sizes ascertained by this method would be

	£	s.	d.
Single male 16-64	2	12	0
Couple 16-64	4	16	0
Couple + 1 child 0-4	6	2	0
Couple + 2 children 5-9, 10-15	8	11	0
Couple + 3 children 0-4, 5-9, 10-15	9	17	0
Aged couple	3	2	0

These costs are some 30 per cent per man unit lower than those calculated under the P.D.L. Objections can be made to the diet on grounds of monotony, difficulty of procuring dried skim milk, etc. Objections can also be taken to the P.D.L. diet on grounds of its generosity, variety, etc. There is little point in labouring these objections. In this study it is proposed to present the cost as ascertained on the P.D.L. basis and by the method used in Southern Rhodesia. These may, if convenient, be viewed as ranges within which the 'reasonable' figure may lie. Some further discussion is contained in the section 'Consumption and Minimum Needs' later in this study.

The most striking feature of Table 3 is the increase in cost caused by children. This increase is magnified when costs of food are relatively high. Thus, for example, although the cost of food for a childless couple in Blantyre is 17s. and in Salisbury is 29s. 0½d., when three children are added to this couple, the respective costs are 34s. 11½d. and 59s. 7½d. Thus, with a fixed income, the difficulties of providing food for children increase considerably as the number of children increases.

Clothing: This component of the P.D.L. is in many ways the most difficult to assess objectively. Much depends on the opinions any person may hold concerning the minimum dress for an African. A pair of men's shoes is available in Blantyre shops for 19s. 9d., but a pair of sandals made from old car tyres is available from the Market for as little as 2s. 6d. Others may consider it unnecessary for Africans at P.D.L. standards of living to have shoes. In this

respect some account must be taken of social etiquette among Africans themselves. A working man may consider it socially essential to wear shoes at work if he is to retain his status among his workmates, and his job from his employer. His wife and children, however, may be able to do without.

It is proposed here to present one standard of dress applicable to all three towns. The only exception is the dark blue cloth and blouse worn by women as traditional dress in Blantyre. Should this standard be unsatisfactory to any reader an amendment can be re-calculated by adding the cost of other types of clothing. The price considered in these calculations is the cost of items obtainable at the ordinary retail price, after the completion of a polite and reasonable amount of haggling by the buyer. Sales and second-hand dealers' prices have been generally ignored. There is some doubt whether these sources of supply offer a very great advantage to the community as a whole.

TABLE 4

Adult Clothing Allowance and Cost in the Respective Towns

Working Man

Items	Amount	Blantyre			Lusaka			Salisbury		
		£	s.	d.	£	s.	d.	£	s.	d.
Shoes	1 pair	19	9		19	6		20	0	
Jacket or coat	1 only	30	0		30	0		35	0	
Khaki trousers	1½ prs.	17	3		23	3		26	3	
Khaki shirts	1½	14	3		15	0		18	9	
Socks	2 prs.	4	0		5	0		3	10	
Sleeping blanket 25% wool	1 only	17	6		15	6		25	0	
Sundries	say	12	6		12	6		12	6	
Annual cost		5	15	3	6	0	9	7	1	4
Monthly equivalent		9	7½		10	0¾		11	9¼	

Adult Woman

Items	Amount	Blantyre			Lusaka			Salisbury		
		£	s.	d.	£	s.	d.	£	s.	d.
Canvas shoes	2 prs.	12	0		12	8		10	0	
Dress	1 only	12	6		18	0		17	0	
Blouse	1 only	—			8	0		9	11	
Skirt	1 only	—			say 17	6		17	6	
Traditional cloth and blouse	1 only	20	0		—			—		
Petticoat	1 only	5	6		10	0		5	11	
Underwear	1½ prs.	2	7		3	9		4	0	
Head-dress	1 scarf	2	6		3	6		2	11	
Jersey or coat	1 only	not worn			10	0		18	0	
Sleeping blanket	1 only	17	6		15	6		25	0	
Sundries	say	15	0		15	0		15	0	
Annual cost		£4	7	7	£5	13	11	£6	5	3
Monthly equivalent		7	3½		9	6		10	5¼	

The clothing allowance suggested in Table 4 is not intended to equip a person *de novo*, but rather to maintain a standard of clothing over the course of a year.

The allowance for adult men and women and its cost in the respective towns is shown in Table 4, which reveals that the monthly cost of clothing for a man in Blantyre is 9s. 7½d., in Lusaka 10s. 0¾d. and in Salisbury 11s. 9¼d. The respective figures for a woman are 7s. 3½d., 9s. 6d. and 10s. 5¼d.

Fixing a realistic proportion for the aged and children is largely arbitrary. The following is suggested as reasonable, expressed as a percentage of the cost for a working man:

	%
Man 65 years and over . . .	75
Woman 60 " " "	60
Child 0-4 years . . .	20
Child 5-9 " . . .	40
Child 10-15 " . . .	60

The cost of clothing children is difficult to assess. Much depends on variables such as the number and sex of the children, school attendance, local attitudes to child nudity, sleeping arrangements of children, etc. Should the proportions suggested above be viewed as unrealistic, calculations based on other assumptions can be made.

The monthly cost of clothing for the aged and children on the above assumptions in each town is as follows:

	Blantyre	Lusaka	Salisbury
	s. d.	s. d.	s. d.
Man 65 and over . . .	7 2½	7 6½	8 10
Woman 60 and over . . .	5 9	6 0½	7 0¾
Child 0-4 . . .	1 11	2 0	2 4¼
Child 5-9 . . .	3 10	4 0½	4 8½
Child 10-15 . . .	5 9	6 0½	7 0¾

Fuel and Light: Assessing the cost of this component is complicated by the difference in cost between their provision for an individual and for a household. There are considerable *per capita* savings as the number of persons served by the fuel and light increase. Allowance must be made for this fact in the P.D.L. calculation.

The economics of African domestic affairs is a poorly studied subject. There is little objective data available. In co-operation with the Soche Authority, Blantyre (Bailey, 1959), the Rhodes-Livingstone Institute was able to conduct certain experiments into the cost of different fuels. The average daily consumption of coal, firewood and paraffin for ten households was:

Coal . . .	14 lb. 3 oz. in stove
Firewood . . .	11 lb. 14 oz. " "
Paraffin . . .	1 lb. 7 oz. in wickless or Primus type pressure stove.

Under prices prevailing in Blantyre, firewood was the cheapest fuel. It cost an average of $4\frac{1}{2}d.$ per day. The price was approximately 2s. 6d. per 77 lb. Considerable variation in cost was shown to exist, caused probably by differing burning qualities of various species of tree. Paraffin was found to cost an average of $6\frac{1}{2}d.$ per day in Soche at a price of 6d. per bottle of 1 lb. 5 oz. net.

Inadequately controlled experiments in Lusaka among the staff of the Rhodes-Livingstone Institute revealed wood fuel to cost an approximate 8d. per day at a price of 35s. a cord.

As the consumption of paraffin is likely to be constant in all three towns, and as the price is approximately the same, it is proposed to consider the cost of fuel in Lusaka and Salisbury to be $6\frac{1}{2}d.$ per day. To date there is no evidence that firewood is cheaper. The cost of firewood in Blantyre, where adequately controlled experiments have been conducted, is $4\frac{1}{2}d.$ per day.

Thus the monthly cost of fuel, in a 30 day month, in each town is

			s.	d.	
Blantyre	.	.	11	3	per month
Lusaka	.	.	15	0	" "
Salisbury	.	.	15	0	" "

It is still necessary to consider depreciation of the stove and also the size of the household. Depreciation of equipment may be calculated at a life of two years, and an initial cost of £3 12s. 6d. for a paraffin burning stove. Thus the annual cost might be £1 16s. 3d. or, monthly, 3s. $0\frac{1}{2}d.$

Thus the cost of fuel and depreciation of equipment in each town is

			s.	d.	
Blantyre	.	.	14	$3\frac{1}{2}$	per month
Lusaka	.	.	18	$0\frac{1}{2}$	" "
Salisbury	.	.	18	$0\frac{1}{2}$	" "

These figures assume the cost of depreciation on wood-burning equipment to be the same as on a paraffin stove.

An arbitrary assessment of the cost of fuel for a single man, against families of various sizes, provides an allowance of 5s. for a single man and additional cost of, say, 1s. per child per month for families.

The cost of light is equally difficult to assess. The needs of school children, expected to do homework, for example, make the provision of one candle per night an inadequate allowance. On the other hand, the needs of a single man may be adequately met by one candle per night.

Experiments conducted at the Rhodes-Livingstone Institute, Lusaka, into the burning time of locally available candles showed:

a 1d.	candle	burned	on	an	average	for	...	2	hours	46	mins.	
a 2d.	"	"	"	"	"	"	"	...	4	hours	40	mins.
a 3d.	"	"	"	"	"	"	"	...	7	hours	12	mins.

The brightness of light was not the same in each case, but if this is not an important factor, then the 1*d.* candle is the cheapest proposition. Paraffin-produced light by orthodox methods is not as cheap as a candle. Similar experiments in Blantyre, using locally available candles, showed the cheapest type to be a 3*d.* candle which burned for 5½ to 6 hours. Since such a candle could be used for three nights, its daily price might be taken as 1*d.*

It is proposed, therefore, to consider one 1*d.* candle per night as an appropriate minimum for single men and for a childless couple. Families with children will be allowed two 1*d.* candles per night.

Thus the cost of light per month is assessed at:

Single men and childless couples ...	2 <i>s.</i> 6 <i>d.</i>	per month
Families with children ...	5 <i>s.</i>	„ „

This cost is assumed to apply to all three towns.

Fuel and light, including depreciation on a stove for a childless couple, is thus

TABLE 5

ESTIMATED MONTHLY COST OF FUEL, LIGHT AND DEPRECIATION FOR A CHILDLESS COUPLE

	<i>Fuel</i>		<i>Depreciation</i>		<i>Light</i>		<i>Total</i>	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Blantyre . .	11	3	3	0½	2	6	16	9½
Lusaka . .	15	0	3	0½	2	6	20	6½
Salisbury . .	15	0	3	0½	2	6	20	6½

The budgetary studies made by the Central African Statistical Office (1958, 1959) show that in those suburbs in Salisbury where electricity is not provided, the average expenditure on fuel and light by African families is 15*s.* 6*d.* per month. This takes no account of depreciation. In Table 5 an amount of 3*s.* 0½*d.* has been allowed for this item.

The budgetary studies also showed that only a slight tendency existed for expenditure on fuel and light to increase as income increased. Families with £23 and over per month averaged 16*s.* 6*d.* per month on fuel and light. Expenditure does not appear to increase markedly with an increase in the size of the family. There is therefore some evidence that the P.D.L. calculation, in Salisbury at least, is somewhat generous in respect of the cost of fuel and light.

This item is difficult to assess. The type of food cooked, the utensils in which it is cooked (a pressure cooker, for example, would have a marked effect on cost) and even the equipment in which the heat is produced, e.g. paraffin stoves of various kinds, cut wood, uncut wood burning on a hearth or in a stove, etc., are all variables in the assessment of cost. Similarly, light requirements, especially for school-going children needing it to complete homework

or for adults engaging in reading, sewing, etc., at night add difficulties to an accurate assessment.

The Southern Rhodesian Government considers an allowance of 5s. 2d. per month for a single man, and 15s. 6d. per month for a family of any size and composition might be a more realistic assessment for P.D.L. purposes. This would apply to the African suburb of New Highfield at least. This is a considered opinion based largely on the findings of field enquiries. It is therefore proposed to present this assessment as an alternative to that calculated by me as a suitable P.D.L. assessment.

Cleaning Materials: Under this heading is included such items as toilet and washing soap for personal and household use, and a reasonable supply of water.

The allowance per head per month and its cost is

	Blantyre	Lusaka	Salisbury
4 oz. toilet soap .	6	6	6
8 oz. washing soap .	1 0	10	6
150 gals. of water .	9	6½	6½
	<hr/> 2 3 <hr/>	<hr/> 1 10½ <hr/>	<hr/> 1 6½ <hr/>

Transport to and from Work: The siting of African residential suburbs in Blantyre and Lusaka is such that a man may be expected to walk if living at P.D.L. standards. The size of Salisbury and the siting of African residential areas makes walking the distance from home to work an inhuman burden. Bus fares at the time of field work were considerably in excess of a likely maintenance and depreciation cost of a bicycle. In the absence of objective data on the cost of running a bicycle, a sum of 7s. 6d. per month is considered reasonable for conditions pertaining to Salisbury.

Taxation: At the time of field work, the statutory tax required of a male of working age was, in each town:

Blantyre . . .	30s. per annum or 2s. 6d. per month
Lusaka . . .	15s. " " " 1s. 3d. " "
Salisbury . . .	40s. " " " 3s. 4d. " "

Rent: This component varies so markedly among different areas of each town, and, though less markedly, between one town and another, that it is advisable to compute the P.D.L. without any allowance for rent. Thus a P.D.L. figure taking cognizance of any rent factor can be computed by adding the given cost of rent to the appropriate figure in Table 6.

Cost at P.D.L. Standards: The P.D.L. for the respective towns by household size is shown in Table 6. Rent is excluded. A month is calculated at 4½ weeks.

TABLE 6

Monthly Cost of P.D.L. Standards

BLANTYRE

<i>Household</i>	<i>Food</i>		<i>Cloth- ing</i>	<i>Fuel and Light</i>	<i>Cleaning Materials</i>		<i>Trans- port</i>	<i>Tax</i>	<i>Total</i>				
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>	£	<i>s.</i>	<i>d.</i>	
Single male, 16-64 .	39	8	9	7½	11	9½	2	3	—	2	6	3	5 10
Married couple, 16-64 .	73	9	16	11	16	9½	4	6	—	2	6	5	14 5
Married couple and 1 child, 0-4 . . .	93	8½	18	10	20	3½	6	9	—	2	6	7	2 1
Married couple and 2 children, 5-9, 10-15 .	131	6½	26	6	21	3½	9	0	—	2	6	9	10 10
Married couple and 3 children, 0-4, 5-9, 10-15 . . .	151	6	28	5	22	3½	11	3	—	2	6	10	15 11
Aged couple . . .	47	10	12	11½	16	9½	4	6	—	—	—	4	2 1

LUSAKA

<i>Household</i>	<i>Food</i>		<i>Cloth- ing</i>		<i>Fuel and Light</i>		<i>Cleaning Materials</i>	<i>Trans- port</i>	<i>Tax</i>	<i>Total</i>			
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	£	<i>s.</i>	<i>d.</i>
Single male, 16-64 . . .	58	8	10	1	15	6½	1	10½	—	1	3	4	7 5
Married couple, 16-64 . . .	108	5	19	7	20	6½	3	9	—	1	3	7	13 6½
Married couple and 1 child, 0-4	137	8	21	7	24	0½	5	7½	—	1	3	9	10 2
Married couple and 2 children, 5-9, 10-15 . . .	193	5	29	8	25	0½	7	6	—	1	3	12	16 10½
Married couple and 3 children, 0-4, 5-9, 10-15	222	8	31	8	26	0½	9	4½	—	1	3	14	11 0
Aged couple	70	7½	13	7	20	6½	3	9	—	—	—	5	8 6

SALISBURY

<i>Household</i>	<i>Food</i>		<i>Cloth- ing</i>		<i>Fuel and Light</i>		<i>Cleaning Materials</i>		<i>Trans- port</i>		<i>Tax</i>		<i>Total</i>		
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	£	<i>s.</i>	<i>d.</i>
Single male, 16-64 . . .	68	0	11	9	15	6½	1	6½	7	6	3	4	5	7	8
Married couple, 16-64 . . .	125	7	22	2½	20	6½	3	1	7	6	3	4	9	2	3
Married couple and 1 child, 0-4	159	8	24	7	24	0½	4	7½	7	6	3	4	11	3	9
Married couple and 2 children, 5-9, 10-15 . . .	224	1	33	11½	25	0½	6	2	7	6	3	4	15	0	1
Married couple and 3 children, 0-4, 5-9, 10-15	258	2	36	4	26	0½	7	8½	7	6	3	4	16	19	1
Aged couple	81	6½	15	11	20	6½	3	1	—	—	—	—	6	1	1

This table shows that for a family of husband, wife and two children, one aged between 5 and 9 years and the other between 10 and 15 years, the cost of living at P.D.L. standards is:

	£	s.	d.
Blantyre . . .	9	10	10
Lusaka . . .	12	16	10½
Salisbury . . .	15	0	1

These figures are also broadly applicable to a family of husband, wife and three small children below ten years of age. Primary families with related adults resident with them may be treated as containing the primary family plus the respective costs for a single male or female in respect of food, clothing, cleaning materials, transport to work and tax, if applicable, and the child's allowance for fuel and light, i.e. one shilling, per related adult.

These figures may be compared with those recently calculated by Mrs. Ruth Webb in the Department of Economics, University of Natal, South Africa. She has kindly allowed me to use her material in advance of its publication. Although differing somewhat in the details of calculation, it is comparable in its intention with the studies made in Central Africa. It is a standard applicable to Non-Europeans of all races in Durban and does not refer specifically to Africans.

Table 7 shows the weekly and monthly calculations for a family of five (rent is excluded).

TABLE 7
Cost of Living at P.D.L. Standards in Durban

	Per Week		Per Month		
	s.	d.	£	s.	d.
Man (labourer) . . .	23	7½			
Wife . . .	17	9½			
Boy, 14 years . . .	18	11			
Girl, 10 years . . .	15	6½			
Infant . . .	10	10			
Household fuel and light . . .	2	2			
	88	10½	19	5	0
Transport (rail) . . .			1	10	6
Tax . . .			1	8	
Total per month . . .			20	17	2

The figure of £20 17s. 2d. in Durban for a household of five compares from a P.D.L. point of view with a corresponding figure of £16 19s. 1d. in Salisbury, £14 11s. in Lusaka and £10 15s. 11d. in Blantyre-Limbe. The nutritive value of Mrs. Webb's diet allows for

a slightly more generous intake per day than the Central African studies. Its variety, as compared even with the Salisbury study, is also greater but its cost slightly less due to a somewhat lower general price of foodstuffs in Durban. Similarly, Mrs. Webb's clothing list is slightly more generous than mine; it allows for a man's pyjamas, tie and belt, and a woman's vests and nightdress.

The suggestions of the Southern Rhodesian Government concerning the cost of food and of fuel and light, added to the remaining components of the P.D.L. in Salisbury, gives the following P.D.L. for given households in Salisbury:

TABLE 8

P.D.L. at Standards adjusted for Food and for Fuel and Light as suggested by Southern Rhodesian Government

Household	Food	Clothing Footwear Blankets	Fuel and Light	Cleaning Material	Trans- port	Tax	Total
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	£ s. d.
Single male, 16-64 . . .	52 0	11 9	5 2	1 6	7 6	3 4	4 1 3
Couple, 16-64 . . .	96 0	22 2	15 6	3 1	7 6	3 4	7 7 7
Couple + 1 child, 0-4	122 0	24 7	15 6	4 8	7 6	3 4	8 17 7
Couple + 2 children, 5-9, 10-15 . . .	171 0	34 0	15 6	6 2	7 6	3 4	11 17 6
Couple + 3 children, 0-4, 5-9, 10-15 . . .	197 0	36 4	15 6	7 9	7 6	3 4	13 7 5
Aged couple . . .	62 0	15 11	15 6	3 1	—	—	4 16 6

For convenience, it is proposed in future discussions to refer to the 'Salisbury reduced standard' when meaning that suggested by the Southern Rhodesian Government, and the 'Salisbury P.D.L.' or similar words, when meaning the standard suggested as minimal by me.

The Effective Minimum Level: The P.D.L. is an inadequate standard of actual needs. It aims at costing only minimum basic needs. Theoretically it is possible to calculate the costs of other less essential items such as school books and clothing, medicines, recreation, etc. A further list of even less essential items could then be added, e.g. cost of annual holidays, minimum allowance for depreciation of furniture or even for tobacco or alcohol. African social standards demand the satisfaction of a number of other needs more associated with their systems of kinship and the obligations these systems demand. The P.D.L. is calculated on the assumption that a family or household is a unit of consumption with no economic obligations beyond it. This assumption has only limited applicability in Western Society; it has much less in many African societies where the rights of sisters' children over their uncle or those even of parents over sons, for example, are formalized and widely respected.

To my knowledge, adequate methods of computing these costs under the various systems of kinship to be found in Central Africa have not been devised. The budget method, where household budgets are recorded over a number of weeks or months, is clearly unsuitable.

This study does not attempt to suggest suitable methods. Suffice it merely to leave the problem posed.

Given the condition that gross household income is equal to or less than the cost of living at the P.D.L. standard, then expenditure on items not included in the P.D.L. must be made at the expense of items included in it. In practice, possibly no household with a gross income equal to its appropriate P.D.L. figure expends its available income as thoughtfully and prudently as the theoretical statement supposes. It may then be asked: At what level of income does the average family include among its purchases all the items essential to the P.D.L. standard? It is this level of income that Professor Batson (1944, p. 14) calls the *Effective Minimum Level*.

Batson's research in Cape Town shows this level of income to be approximately 150 per cent of the P.D.L. There has been no attempt to ascertain it for Central Africa, but there appear to be no local circumstances suggesting it may be lower. Thus the P.D.L. must be viewed as a measurement far removed from what a given family in practice requires to sustain itself in a minimum state of health and decency. The demands of living in practice should not be confused with the theoretical costs of the rational man.

THE ADEQUACY OF WAGES

The urban worker is fundamentally dependent on his wage. In Blantyre there is considerably more exchange of goods between country and town than in Lusaka or Salisbury. In such towns which are geographically remote from rural villages, there is no doubt as to the urban worker's almost complete dependence on his wage. In the first report on the Urban African Budget Survey in Salisbury 1957/8, issued by the Central African Statistical Office (1958, p. 10), the income from wages is very considerably greater than the income from other sources. The latter amounted to an average of 4s. 6d. for an income of £6 15s. 8d. per month, and to £1 12s. for an income of £20 18s. 6d. The adequacy of urban incomes must be gauged largely against prevailing wage rates.

The Central African Statistical Office and the Departments of Labour of the three Territories publish considerable data on wages. Unfortunately none of this reflects the distribution of African wages for any given city or town at a given date. Frequently they take the form of wages as agreed to by industrial councils, average wages for given trades or industries, etc. The 'take home wage', i.e. the amount taken home after additions such as overtime, and deductions such as contributions to welfare schemes, etc., is the most satisfactory

for present purposes. This is not officially available for any of the three towns under study.

During the research undertaken by the Rhodes-Livingstone Institute in Blantyre-Limbe, Nyasaland, it was necessary to ascertain the 'take home' cash wage of the urban area. This was done in February 1957 (see Bettison, 1958*a*). In Lusaka, the Northern Rhodesian Department of Labour, which is developing an excellent statistical service, provides an indication of wages paid, obtained from the Inspection Reports of Labour Officers. The Rhodes-Livingstone Institute's social survey of Lusaka provides further data (see Bettison, 1959*a*). The latter is possibly more representative of the town as it includes servants of the Rhodesia Railways, Government Departments and certain other organizations omitted from the returns of the Labour Inspectors. Very little data is available in Southern Rhodesia. A survey of African wages undertaken by the Department of Labour in June 1958 provides the best indication available, but it does not refer specifically to Salisbury.

In all three towns, employees receive certain hidden benefits. The most significant of these is free accommodation in the majority of cases. However, as the P.D.L. was calculated without reference to a rent factor, it can be assumed that this benefit does not affect the present study. Certain employers supply free or subsidized food to their employees. This is not a very widespread practice in the major towns and may be ignored for present purposes. The Lusaka study showed the average of all allowances, excluding rent, to be somewhat over 17*s.* per month, but this may vary from place to place. Other benefits such as free rail fares when on leave, bicycle allowances, clothing allowances, etc., are again very limited. Although giving an employee a slight advantage, it is proposed to make a direct comparison between cash wages received and the requirements of a household at P.D.L. standards.

The Blantyre study (Bettison, 1958*a*, p. 8) revealed that approximately 62 per cent of males earned in cash under £3 per month, 21 per cent earned between £3 and £4 19*s.* 11*d.*, 13 per cent earned between £5 and £9 19*s.* 11*d.*, and 4 per cent earned £10 and over. The average for the whole is approximately £3 11*s.* 2*d.* The P.D.L. calculation made in Table 6 above shows the cost of living at a P.D.L. standard to be £3 5*s.* 10*d.* per month for a single man. It was £5 14*s.* 5*d.* for a couple with no children. It appears that for those earning under £3 per month to be living at approximately P.D.L. standards all must be 'single', i.e. free of dependents in town. This is unlikely to be the case. The income structure of Blantyre-Limbe, because of the close connections between country and town, deserves further elaboration. The point will be taken up again in a subsequent section of this Paper. It is enough to say that the average cash wage level is sufficient to support a single man but not a married man with or without children at P.D.L. standards.

The Lusaka study (Bettison, 1959, Sections F and G) dealt at

some length with the relation between household size and income. The study revealed the average cash wage of the sample to be £7 2s. 5d. The cost for a childless couple at P.D.L. standards was ascertained above to be £7 13s. 6½d. It is thus inevitable that a considerable proportion of families with children will have incomes below the appropriate P.D.L. In fact the percentages of households of given size which had incomes below the P.D.L. are

	%
Childless couples	65
Couple and 1 child	78
Couple and 2 children	78
Couple and 3 children	87
Couple and 4 children	77
Couple and 5 children	81
Couple and 6 or more children	86
Average	80

The term 'child' is used loosely in this connection. Children are not necessarily the offspring of the parents, nor are they necessarily under 16 years of age. Households are treated in terms of their 'consumer value'. Thus a family of husband, wife and children, aged 17, 8 and 4, where income is clearly below the approximate P.D.L. figure, is treated as a couple and three children rather than a couple and two children plus one adult. The influence of additional income from children at work is not very marked. The demographic structure of the population does not permit this phenomenon to exert much influence at the present time.

In contrast to these big percentages, only 22 per cent of single or unattached men have incomes below the P.D.L. figure. The general picture in this respect is similar to Blantyre: income is adequate for the majority of single men, but inadequate for families, especially those with children. To emphasize this inadequacy of wages for a family with children, Figure 1 shows the discrepancy between the approximate average male wage and the P.D.L. The composition of the family is a husband, wife and two children between 5 and 9, and 10 and 15 years of age.

A detailed examination was made of the Lusaka study to ascertain what advantage households obtained from the keeping of adult relatives. The lodger is familiar in most Western countries and many others, including the Cape Coloureds of the Eastern Cape Province (Irving, 1958), as a supplement to household income. In Lusaka this was found rarely to be the case. Nearly all adults living with families were found to be related to one or other of the spouses. About 75 per cent of those relatives who were the husband's and 83 per cent of those who were the wife's had been resident with the family for six months or less. Less than 15 per cent had been resident for more than a year. Very few indeed of the families could be considered as benefiting from the presence

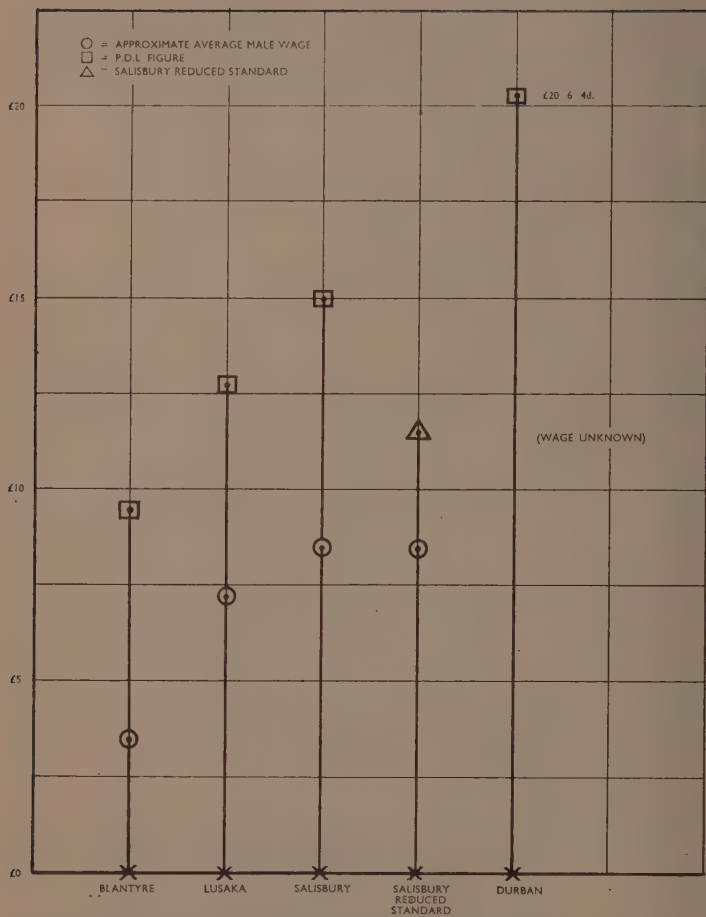


FIG. 1.— Comparison of approximate average male wages and the P.D.L. figure for a couple and two children aged between 5-9, 10-15 years in the three towns, for the 'Salisbury Reduced Standard' and for Durban.

of the relative. Very few of the relatives were recorded as employed or having an income from an urban source. Thus lodgers in Lusaka cannot be considered as contributing to the general income of families at the present stage of the town's development. In fact the majority must be considered as liabilities, at least for short term periods.

The position in Salisbury is somewhat more difficult to assess accurately. The African population is weighted strongly towards the unattached man. The Annual Report of the Department of Native Administration mentions a figure for 1956 of 12,000 married men with families. The average number of children per family is thought to be three. There are 70,600 employees in Salisbury. 'This ratio shows that only 16.5 per cent of the total working population consists of employees with families.'¹

As the minimum statutory wage in Salisbury is currently £6 10s. per month and the P.D.L. for a single man was calculated at £5 7s. 8d. per month, it is reasonable to assume that no single man, disregarding juveniles, has an income below the approximate P.D.L. figure. As the proportion of men with dependents in Salisbury is thought to be small, it follows that the proportion of the total population which might be viewed as 'in poverty' would not be large. In any urban community of the type under discussion it is the presence of the wife and children which creates the poverty. Given the present wage structure of all three towns, single men as a general rule can and do earn sufficient to meet requirements at P.D.L. levels. It is when the wife and children are added to their responsibilities that sources of income, and particularly wages, fall short of requirements at P.D.L. standards.

CONSUMPTION UNDER CONDITIONS OF POVERTY

Poverty is a large scale, group phenomenon. Its effects are generally seen, and not infrequently understood, only in terms of the individual. A ragged fellow on the roadside, a malnourished child or the frequent irresponsibility of low paid workers are phenomena which come to the European's attention. There is a subtle awareness among certain European groups that the African is not a very influential element in the demand for consumer goods. The extent of local consumer demand becomes increasingly important to manufacturers anxious to expand their businesses and with but limited prospects of export. There is an awareness that tuberculosis and high infant mortality rates are mirrors of

¹ Quoted from the *Report of the Urban African Affairs Commission, 1958*, p. 18. The Commission, however, remarked (para. 89): 'If we take into account the "unofficial" families we feel justified in saying that between 40% and 50% of the population in Salisbury may be regarded as constituting family groups'. The Commission, by inference, was referring to the African population. The Commission's figure is supported by the *Preliminary Report on the Salisbury African Demographic Survey, 1958*, Central African Statistical Office, p. 4.

generally poor socio-economic conditions among the groups most affected.

Two studies into African family budgets have recently been undertaken in Central Africa. In Southern Rhodesia the Central African Statistical Office is making a detailed study in the major towns: the 'First Report on Urban African Budget Survey in Salisbury 1957/58' has just been published (1958). In Nyasaland the Rhodes-Livingstone Institute examined the budgets of selected urban dwellers in Blantyre-Limbe and of selected households in peri-urban villages (see Bettison and Rigby, 1960). These analyses reveal not only African expenditure patterns, but the various ways in which Africans with different sizes of income spend their money. The latter is clearly of vital importance in a community which accepts the principle of minimum wage legislation and which claims to be anxious to attract secondary industry.

Both studies substantiate a 'law of consumption' first stated by C. L. E. Engel, (this statistician should not be confused with his contemporary Friedrich Engels) and published in French by Le Play (1853). Simply stated, their law is the smaller the family income, the greater is the proportion of the income spent on food. The Salisbury study found that, for families in rent-free accommodation and not in receipt of rations, 'the pattern of expenditure was fairly constant for families with incomes up to £12 7s. per month'. For incomes below this figure some 66 per cent of expenditure went on food. In the income group £12 7s. 6d. to £15 15s. per month, the proportion spent on food was 61 per cent and in the yet larger income group of £15 17s. 6d. and over per month, the proportion was 57 per cent.

The amount of income available for expenditure on non-edible items is of considerable importance to manufacturers of consumer goods and the retail trade generally. Further, the type of food consumed will have a direct bearing on the type of farming required to supply it. Both these rather simple relationships are relevant to the discussion. The presence of large numbers of Africans with small incomes can be inimical to the changes required of commerce and agriculture in providing for a modern urban environment.

THE SALISBURY STUDY

The Salisbury study, already referred to, analysed the budgets of 640 families and 564 single men. There is no specific statement in the Report that these samples may be viewed as representative of Africans in Salisbury. Yet they were not deliberately chosen to represent the upper or the lower income groups only. They are likely to approach a position representative of the whole. We may suppose that the modesty of the statisticians prevailed in the limited claims they make for their excellent study.

The total sample is broken down according to whether rations and accommodation are received as part of salary. The total of each type is divided into five more or less equal parts according to their income, i.e. into quintile income groups. The average expenditure of each quintile group is analysed according to edible and non-edible items. It is thus possible to make a detailed analysis of both food purchased and expenditure on non-edible items.

In Table 9, taken from pages 10, 21, 28 and 34 respectively of the Salisbury Report, is shown the average monthly expenditure of each quintile income group for families in rent-free accommodation and not in receipt of rations; families in rent-free accommodation but receiving rations as part of remuneration; unrationed single men in rent-free accommodation as at March 1958¹ and

TABLE 9

Average Monthly Expenditure of Quintile Income groups in
Salisbury

Unrationed Families in Rent-free Accommodation

	<i>1st</i>			<i>2nd</i>			<i>3rd</i>			<i>4th</i>			<i>5th</i>		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Expenditure on food	5	1	3	5	19	6	7	3	10	7	13	1	10	4	8
On non-edible items	2	16	9	2	18	3	3	7	9	4	19	9	7	13	8
Total Expenditure .	7	18	0	8	17	9	10	11	7	12	12	10	17	18	4

Rationed Families in Rent-free Accommodation

	£ s. d.			£ s. d.			£ s. d.			£ s. d.			£ s. d.		
Expenditure on food	2	10	9	3	11	7	4	0	0	5	11	3	5	18	11
On non-edible items	1	15	0	3	1	2	2	7	10	4	9	10	6	10	9
Total Expenditure .	4	5	9	6	12	9	6	7	10	10	1	1	11	9	8

Unrationed single men in Rent-free Accommodation

	£ s. d.			£ s. d.			£ s. d.			£ s. d.			£ s. d.		
Expenditure on food	3	4	1	2	15	9	2	15	10	3	15	1	3	15	10
On non-edible items	1	19	4	2	9	7	3	16	2	2	11	10	5	8	9
Total Expenditure .	5	3	5	5	5	4	6	12	0	6	6	11	9	4	7

Rationed and Rent-free single men

	£ s. d.			£ s. d.			£ s. d.			£ s. d.			£ s. d.		
Expenditure on food	15	11		17	3		1	8	3	1	8	0	1	14	8
On non-edible items	2	0	10	4	6	9	3	4	11	2	10	11	5	8	10
Total Expenditure .	2	16	9	5	4	0	4	13	2	3	18	11	7	3	6

¹ It was necessary to take the March 1958 figures as the expenditure pattern changed after minimum wages were raised from £4 15s. 6d. to £6 10s. per month.

rationed and rent-free single men as at March 1958. Despite receiving rations as part of remuneration some portion of the cash wage was also spent on food.

In general terms the amount spent on non-edible items in all four categories of the table is similar. Variations occur at the extremes, i.e. in the 1st and 5th quintiles, particularly. Allowing for the effects of small samples, it may be stated that in family households cash expenditure on non-edible items varies from approximately £2 to £3 5s. per month in the 1st, 2nd and 3rd quintile groups and rises thereafter to more than double these amounts. Single men show a slightly bigger range from £2 to approximately £4 in the 1st to the 4th quintile group, but expenditure rises to over £5 in the 5th quintile group. Thus the vast majority of workers in rent-free accommodation in Salisbury, whether rationed or unrationed, spend some £2 to £4 per month on non-edible items. This suggests that a very considerable proportion of Africans in Salisbury, at present wage rates and costs of foodstuffs, do not create a very effective demand for non-edible consumption goods. The nature of the goods they purchase will be examined later.

In Table 9, the income that has been divided into quintiles varies among the four categories. It may be assumed that the value of rations received is constant between married and single men. This point has been checked by comparing the incomes in the 2nd and 3rd quintile income groups of rationed and unrationed categories. The difference is £3 5s. to £3 9s. for families and £2 12s. 6d. to £3 3s. for single men. Married men with their families in Salisbury have incomes including the value of rations, where paid, clustering around £8 to £12 per month. These figures are somewhat less than those quoted in the preliminary Report on the Salisbury African Demographic Survey (August/September 1958, p. 12, Central African Statistical Office) which shows the mode to cluster around £6 10s. to £10 5s. per month. Single men, on the other hand, have incomes clustering around £6 10s. to £8 10s. per month. The difference between the incomes of these conjugal groups is in the region of £1 10s. to £3 10s. per month. A similar disparity in income between these conjugal groups was found in Lusaka (Bettison, 1959).

This is revealing. It was shown in Table 9 that the amount spent on non-edible items was, generally speaking, the same in family households as in those of single men. It would appear that the difference in income between the conjugal groups is spent entirely on food in family households. Thus on a *per capita* basis, family households with approximately modal incomes spend very much less on non-edible items than do single men with commensurate incomes. It is indeed in the family type of household that poverty is severest. The point is a practical demonstration of the increase in cost caused by supplying food to children and tends to support the P.D.L. assumption on this point. It appears that the higher

income received by families, as distinct from single men, scarcely affects the purchasing power for non-edible items at the level of the modal income group. Above the modal income group, however, this generalization becomes increasingly false. Further, the range of income of families is considerably greater than that of single men.

This conclusion raises the issue of policy towards the extensive use of single, migrant labour or married men in a city such as Salisbury. Leaving aside such relevant topics as increased productivity from, so called, stable labour, and the greatly increased cost of supplying the essential services to families as against single men, the conclusion leads to the suggestion that *in the immediate future* a small increase in wage rates will stimulate demand for consumer goods from single men only. But the lessons learned from the rise in statutory minimum wages in January 1958 are apposite. The Salisbury Report (p. 2) mentions 'that on the average unrationed single men saved most of their increased incomes whilst rationed single men used most of their extra income to purchase extra food, blankets and clothing, cycles, drink and to make gifts to girl friends'. Policy designed to stimulate the settlement of families is unlikely to raise consumer demand for non-edible items at current wage rates. It appears that to stimulate demand for non-edible items in Salisbury, it is necessary for family households to have an income in excess of £12 10s. per month at the present cost of foodstuffs. Increases in income after this figure appear cumulatively to increase expenditure on non-edible items. It is relevant to note that the figure £12 10s. is approximately equivalent to the cost of living at Poverty Datum Line standards for a couple and two small children.

THE BLANTYRE STUDY

A similar study in Blantyre-Limbe has the advantage of ascertaining what occurs among urban households when average wage rates are somewhat less than half those in Salisbury; and where, as in Blantyre-Limbe, there is fairly easy access for certain urban dwellers to food produced in peri-urban villages. This food is obtainable, often from relatives, on terms we have as yet been unable precisely to ascertain. This agricultural connection is much less developed in Salisbury where the fruits of agricultural activities on the part of one of the urban spouses, or of relatives, are generally not available to urban dwellers.

The Blantyre-Limbe study was made with considerably smaller samples than that in Salisbury. The samples were also deliberately selected to include subjects with a wide range of household income. The emphasis was placed on the upper income groups on the grounds that the choice of goods purchasable with a larger income would be wider than among households with a low income. Thus, although some samples were taken from the lower income groups, the study

deliberately included more of the upper income households than their actual proportion in the total population would allow.

Urban budget studies were made on three occasions of six weeks duration each. Unfortunately only twelve households were available for study on all three occasions. Others of approximately similar wage were included on the second and third occasions to make up the deficiency. The timing of these studies was an attempt to ascertain the influence on urban dwellers of seasonal changes in the agricultural cycle. Seasonal studies were made in August 1957 when food supplies were plentiful; in November 1957 when food shortages, especially in maize and maize flour, were beginning to appear in the peri-urban villages; and, lastly, in February 1958 when food supplies in peri-urban villages were likely to be at their lowest and food prices on the municipal markets were high. The new crop grows during the summer rains. The presence of urban markets, which draw their supplies from considerable distances, enables urban dwellers to purchase food when it is not available from other sources (Communication 17).

The sample of budgets was broken down into four categories, as shown in Table 10, which shows the average percentage of total expenditure spent on foodstuffs by each of the categories for the three seasonal studies.

TABLE 10
Seasonal Variations in Expenditure on Food in
Blantyre

<i>Wage Category</i>	<i>1</i>	<i>2</i>	<i>3</i>
	%	%	%
(a) Under £3 10s.	45	57	72
(b) £3 10s. 1d. to £5 10s.	49	59	57
(c) £5 10s. 1d. to £9 10s.	32	50	47
(d) Over £9 10s.	30	36	42

The table demonstrates again the relevance of Engel's Law of Consumption. The proportion of total expenditure spent on food declines as income rises. The exception is wage categories (a) and (b) during the first and second seasonal study when the proportion of total expenditure spent on food increased with a rise in wages. It indicates, apart from purely statistical influences, either that those in wage category (b) were less dependent on agricultural produce than those in category (a), or a rise in wages enabled households in category (b) to purchase more and/or different food. The phenomenal rise, in wage category (a) during the third seasonal study, in the percentage spent on food (to 72 per cent of total expenditure) suggests that at that time of the year all food was purchased. There is also a seasonal rise in market prices during the rainy season.

In terms of cash spent on edible and non-edible items, the figures are as contained in Table 11. In this connection it should be noted that it was impossible to separate purchases of food intended for the manufacture of African beer or to be distilled into the local 'Kachasu', from purchases for household consumption. It will also be observed that the total expenditure exceeds the maximum of the wage range in many instances. This is due to the prevalence of sources of income other than wage. The importance of these extraneous sources is discussed by Bettison and Rigby (1960).

TABLE 11

Expenditure on Food and Non-Edible Items—Seasonal Studies in Blantyre

<i>Wage Category (a)</i>	<i>1st</i>			<i>2nd</i>			<i>3rd</i>		
	£	s.	d.	£	s.	d.	£	s.	d.
Expenditure on food	2	1	6	2	5	2	3	2	4
On non-edible items	2	9	11	1	13	8	1	4	11
Total Expenditure	4	11	5	3	18	10	4	7	3
<i>Wage Category (b)</i>									
Expenditure on food	2	14	11	3	6	11	2	18	11
On non-edible items	2	17	5	2	6	6	2	4	7
Total Expenditure	5	12	4	5	13	5	5	3	6
<i>Wage Category (c)</i>									
Expenditure on food	3	5	4	3	13	8	3	7	6
On non-edible items	6	19	10	3	14	8	3	15	2
Total Expenditure	10	5	2	7	8	4	7	2	8
<i>Wage Category (d)</i>									
Expenditure on food	5	16	10	6	0	5	5	10	5
On non-edible items	13	16	4	10	15	0	7	12	0
Total Expenditure	19	13	2	16	15	5	13	2	5

Table 11 shows that expenditure on non-edible items was fairly constant up to a wage level of approximately £5 10s. At this wage level, except for the 2nd and 3rd seasonal study of wage category (a), expenditure on non-edible items ranged from £2 4s. 7d. to £2 17s. 5d. per month. The reduced expenditure on non-edible items in the 2nd and 3rd seasonal study of wage category (a) may be a result of greater expenditure on foodstuffs due to the onset of shortages in peri-urban villages and a rise in market prices. The

significance of this point is discussed later. As in the Salisbury study, amounts spent on non-edible items in the upper wage categories rose steeply as income increased.

A study of cash wages in Blantyre-Limbe, made shortly before the budget study (Bettison, 1958*a*, p. 8), shows approximately 83 per cent of the labour force to receive less than £5 per month. Thus an overwhelming proportion of Africans in Blantyre-Limbe may be viewed as spending only between £2 and £3 per month in non-edible items. As was the case in Salisbury, Africans in Blantyre-Limbe cannot be viewed as creating a very effective demand for non-edible consumer goods.

The fact that £2 to £3 per month in Blantyre-Limbe and from £2 to £4 per month in Salisbury is spent by the modal income groups of Africans is significant. Despite the fact that average wages are less than half in Blantyre than they are in Salisbury, approximately the same is spent on non-edible items by the modal income groups in each town. There is little doubt that the low cost of food, the agricultural relationship between some town dwellers and peri-urban or rural villagers and the opportunities to supplement wages in Blantyre-Limbe, contribute in no small measure to making life possible at the wage rate prevailing at the time of study. A further increase in the statutory minimum wage has been made since that time.

The decline in expenditure on non-edible items observed during the 2nd and 3rd seasonal study in the under £3 10*s.* per month wage category (Table 11), cannot be viewed as coincidental. Rigby's (1960) analysis of the sources of income shows income from food sales, beer sales, credit and other items, to decline during the second and third seasonal study in this wage category particularly. This strongly suggests that the maintenance of a level of consumption of non-edible items at between £2 and £3 per month is for this wage category dependent largely on sources of income other than wages. It will be observed that expenditure on food increases steadily over the three seasonal studies for the lowest wage category. The declining expenditure on non-edible items coupled with the increase in expenditure on food suggests this income group is in an extreme condition of poverty at the end of the dry season and during the rainy season, i.e. until March. Under conditions prevailing in Salisbury it is possible for family households in the lowest income groups to maintain a level of consumption of non-edible goods of between £2 and £3 5*s.* per month.

The conclusion is that a wage of, say, £4 per month makes it necessary for urban family households in Blantyre-Limbe to retain connections with sources of agricultural produce, to brew beer, or in some other way to enhance their wage, if they are to maintain a standard of consumption of non-edible items that appears in both Salisbury and Blantyre-Limbe to be a minimum. During those months of the agricultural cycle when these sources of supply

diminish and the families have to fall back, possibly entirely, on local markets, they are then unable to maintain this standard of consumption. It appears that the wage rates of Salisbury, despite the costs of food and the relative lack of other sources of income than wages, provide a steadier pattern of consumption. A wage rate of £4 per month in Blantyre-Limbe can support a similar consumption pattern only when conditions are favourable for its supplementation and when market prices are low: but such wages cannot maintain this standard of non-edible consumption as soon as these conditions fall away. Being largely dependent on agriculture, it follows that this feature occurs annually.

The analysis shows that in Blantyre-Limbe, at present prices of foodstuffs commonly consumed by Africans, there will be little effective demand for non-edible items until modal wage rates applicable to married men reach a figure in excess of £5 10s. per month and households remain able to supplement income from sources other than wages by possibly a further £1 10s. per month. The income level at which demand for non-edible consumer goods begins its steep rise upwards, is, at present food prices, in the region of £7 per month; compare categories (b) with (c) and (d) above. It is inevitable that at present wage rates, in the absence of demand for capital goods, especially in the building and civil engineering trades, and with the present small European community, i.e. very high income group, in Blantyre-Limbe, that no manufacturer of consumer goods other than those falling into what is currently included in the £2 to £3 per month spent on non-edible items, will be able economically to establish himself in Blantyre-Limbe. Indeed, ostensibly low wage rates are no incentive to industrialization in the absence of an export market. They do not provide the wherewithal to purchase the goods produced.

There is a further difficulty confronting the aspiring industrialist in Blantyre-Limbe. The close proximity of African villages, composed predominantly of families, and the availability of land on which close settlement of families is possible, largely prevents the use of single or 'unmarried' men in the urban area. The fact that so-called single men are accommodated by employers in single quarters is no guarantee in Blantyre-Limbe that a wife and children in a peri-urban village are not being visited every week-end. Such a pattern of life should tend to produce a pattern of expenditure conforming more to that of a married than a single man. Current research may substantiate or refute this hypothesis. The analysis in detail of income and expenditure patterns of households resident in peri-urban villages is still proceeding at the time of writing. Current indications are that the distribution over family members of income earned by a household resident under peri-urban uxorilocal conditions of marriage is by no means similar to what it is in a corresponding household neolocally resident in an urban area. The Salisbury study showed that single men are, on a *per capita*

basis, purchasing a considerably greater quantity of non-edible goods than married men and their dependents. Thus the increased purchasing power over non-edible goods which might result from a rise in minimum wage rate in Salisbury would largely be denied to the manufacturer in Blantyre-Limbe. There is, however, an unpredictable factor in the situation: the Salisbury study showed that an increase in minimum wage among unrationed single men led to them increasing savings. If they intend to take these savings to the rural areas increases in urban wage rates for single men may be reflected in a larger rural expenditure rather than on commodities more commonly bought in urban areas. With very considerable numbers of 'single' men coming from Portuguese East Africa such a change may be reflected, also, in the international balance of payments.

Lastly, there is no certainty under conditions pertaining to Blantyre-Limbe, that a considerably higher urban African wage rate will not stimulate a sympathetic rise in the price of foodstuffs commonly consumed by Africans. Such an event would vitiate much of the effect on consumer demand anticipated from the rise in wage rates, unless the rural producer spent his money in turn on consumer goods.

SALISBURY AND BLANTYRE COMPARED

The budgetary studies throw some light on the nature and quantities of edible and non-edible goods consumed by urban Africans. The Salisbury data is conveniently summarized (1958, p. 4, para. 21) as follows:

The principal foodstuffs purchased and the proportion of food expenditure on each by unrationed families were:

Mealie meal, 16 to 10 per cent, the proportion falling as income increased.

Meat, 26 to 29 per cent, fairly constant at all income levels.

Bread, 19 per cent, fairly constant at all income levels.

Sugar, 11 per cent, fairly constant at all income levels.

Milk, 6 to 10 per cent, the proportion increasing with income.

Fish, 2 per cent, fairly constant at all income levels.

Other foods, 17 to 25 per cent, the proportion increasing with income.

The most important 'other foods' were vegetables, margarine, tea, cooking oil, fruit, poultry and eggs, and rice.

For comparison, the corresponding figures (the average for the three seasonal studies) in Blantyre-Limbe were: Maize and mealie-meal, 33 to 25 per cent; Meat, 12 to 20 per cent; Bread, 5 to 7 per cent; Fish (fresh), 4 to 9 per cent; Dried fish, 17 to 5 per cent; Other foods, 27 to 39 per cent. Thus the proportional consumption of maize and maize flour is over twice as great in Blantyre-Limbe as in Salisbury. This does not mean that the cash expended is twice as great. In fact, as will be seen below the cash expended

is roughly constant. It is the smaller income in Blantyre that leads to the doubling in proportional expenditure. Meat, on the other hand, is less than half as great as in Salisbury for the lower income groups, but tends to approach a similar proportional expenditure in the upper income groups. The proportional expenditure on fresh and dried fish is very considerably greater in Blantyre-Limbe than in Salisbury. Proportional expenditure on bread in Blantyre-Limbe is under half that of Salisbury.

These proportional differences show that the dietary pattern in Blantyre-Limbe is heavily weighted, in relative terms only, towards mealie meal and fish, whereas that in Salisbury contains more meat and bread. The differences have most significance, however, when the actual average sums spent on each commodity are compared. This comparison is more difficult to make than it appears at first sight. The Salisbury study suggested the modal income group of family households was £8 to £12 per month. In Blantyre-Limbe it is probably £3 to £4 per month. Thus it is necessary to compare the cash expenditure rather than proportional expenditure on different commodities of these income groups. It is proposed to compare wage category (b) (average of the seasonal studies) in Blantyre-Limbe with the average expenditure of the second and third quintile groups of the unrationed families in Salisbury (page 10 of the Salisbury Report). Though not perfect, this comparison will give a reasonable indication. Comparison at these levels of income has the further advantage of having similar amounts spent on non-edible items in each town.

TABLE 12

Actual Expenditure on Edible Items among Selected Groups:
Blantyre and Salisbury

<i>Commodity</i>	<i>Salisbury Expenditure</i>		<i>Blantyre Expenditure</i>	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Maize and mealie meal	19	8	19	9
Meat	37	9	7	8
Bread	24	8	3	4
Fresh and dried fish	3	3	11	4
Other items	46	2	18	2
	<hr/>		<hr/>	
	131	6	60	3

This comparison shows expenditure on maize and mealie meal to be the same in Blantyre-Limbe as in Salisbury. Expenditure on fish is between three and four times greater in Blantyre-Limbe than in Salisbury—a phenomenon to be expected for geographical reasons. But expenditure on all other items is considerably greater in Salisbury than in Blantyre-Limbe. For the items specified, expenditure

on meat is approximately five times greater and on bread approximately seven times greater. Milk and dairy products scarcely enter the budget of the Blantyre-Limbe group at all, whereas the Salisbury group spent approximately 8s. 7d. per month on milk alone.

There is little doubt that the absence of a developed dairy industry around Blantyre-Limbe is to some extent due to the almost complete lack of demand for its products by African urban family households. In Blantyre-Limbe milk becomes significant in the budget when wages exceed £5 10s. per month and an income from other sources approaching £1 10s. per month is available, i.e. in wage category (c). At current modal wage rates effective demand for edible goods is limited virtually to maize and its derivatives and to fresh and dried fish. Concerning the latter food, the Blantyre-Limbe study showed a slight increase in expenditure on fresh fish and a considerable decrease on dried fish as income rose. Meat and to a lesser extent fresh fish, tend to be preferred to dried fish in the higher income groups. Thus a rise in real wages is likely to effect the dried fish trade adversely but to benefit the meat and fresh fish trades.

Proportionate expenditure on individual non-edible items in Salisbury remains fairly constant up to a family income of £12 7s. per month. Above this income level proportionately more is spent on clothing and footwear and on miscellaneous items. The same phenomenon, but in somewhat more approximate terms than in Salisbury, is apparent in Blantyre-Limbe. In the latter, however, the change occurs between the wage group £5 10s. 1d. and £9 10s. 1d. in the case of miscellaneous items and above a wage of £9 10s. 1d. for clothing and footwear.

Expressed in terms of cash expenditure, a comparison of wage

TABLE 13
Comparative Expenditure on Non-Edibles, Salisbury
and Blantyre

<i>Items</i>	<i>Salisbury</i>			<i>Blantyre</i>		
	£	s.	d.	£	s.	d.
Clothing	19	9		21	0	
Fuel and light	9	1		2	11	
Drink and tobacco	9	7		2	10	
Other non-edible items	24	7		22	9	
	<hr/> £3 3 0 <hr/>			<hr/> £2 9 6 <hr/>		

category (b) (i.e. £3 10s. 1d. to £5 10s. per month) in Blantyre-Limbe with the average expenditure of the 2nd and 3rd quintile groups of the Salisbury distribution, (i.e. £8 7s. 6d. to £12 7s. per month) reveals the figures shown in Table 13.

The table shows it is largely in fuel and light and in drink and tobacco that expenditure is lower in Blantyre-Limbe. Expenditure on clothing and 'other non-edible items' tends to equate. This supports a conclusion that for the modal income groups under discussion there is a basic minimum of expenditure on non-edible items. Clothes have to be bought from some source or other and in some condition or other. Under severe conditions of poverty fuel and light can be gathered from public land or partly dispensed with; drink and tobacco can be brewed or grown locally or dispensed with. There is a distinct pressure on a household for expenditure on certain items. The condition of households in the lowest income group can only be envisaged as one of extreme poverty.

The greater monetary income available in Salisbury as compared with Blantyre-Limbe, is spent largely on meat, bread, dairy products, vegetables, fuel and light, and drink and tobacco. This does not mean that these or substitute commodities are not consumed at all in Blantyre. Vegetables are often grown in village gardens or the bush supplies wild relishes. Home-produced African beer or the illegal, locally distilled *kachasu* at half a crown a quart bottle, tends to replace the municipally sold Kaffir beer or the European bottled beer of Salisbury. The volume of monetary transactions must be greater in Salisbury and the dependence on subsistence agriculture and the soil greater in Blantyre-Limbe. In terms of socio-economic conditions favourable for establishing commerce and industry the advantage would appear to lie with Salisbury. But the advantage is only relative. The modal income level of both areas, despite the disparity, appears to create a broadly similar demand for maize and maize products, clothing and footwear and various other non-edible items. In neither town can the demand for manufactured consumer goods be viewed as very extensive.

CONSUMPTION AND MINIMUM NEEDS

The above analyses have dealt with actual expenditure as revealed by budgetary studies. It is now intended to enquire to what extent actual expenditure may be considered adequate to maintain persons at a minimum standard of health and decency. The point is particularly cogent if the supposition is correct that statutory wage boards tend to relate the cost of foodstuffs and other essential items with the recommended minimum wage. This point has to be expressed as a supposition as wage boards do not publish reports and their recommendations to Governments are generally confidential. Following the policy begun in the Trade Boards (Minimum Wage) Acts of Great Britain, the enabling legislation does not attempt to define what the amounts considered minimum should be or the basis on which they should be calculated. An earlier part of this study has shown that most single men in Blantyre-Limbe,

Lusaka and Salisbury earn sufficient to meet their minimum needs. Poverty is especially prevalent in family households.

If the cost of items entering into the P.D.L. calculation, quoted in Table 6 above, are viewed as representing a minimum to maintain health and decency, they may be compared directly with the actual expenditure revealed by budget studies. The average size of families in the second to fourth quintile group of unrationed families in rent-free accommodation in Salisbury is 3.7 to 4.1 international man units. This represents a married couple with two or three children. Though a somewhat smaller family than that of the budget analysis, it may be compared with the family of husband, wife and two children aged 5-9 and 10-15 in the P.D.L. study which would give an international man unit equivalent of 3.4.

The P.D.L. minimum in Salisbury for this household is calculated at

£	s.	d.	
11	4	1	for food
1	14	0	for clothing and footwear
1	5	0	for fuel and light
	6	2	for cleaning materials
10	10		for transport and tax
<hr/>			
15	0	1	

The recorded average total income of household in the second to fourth quintile groups of the Salisbury study was £8 19s. 11d. in the second quintile, £10 19s. 4d. in the third quintile and £13 11s. 7d. to £15 15s. Thus only a very small number of the 235 households in these quintile groups had total incomes equating to the minimum calculated for the P.D.L. This suggests that average modal incomes in Salisbury for family households of this composition are inadequate to maintain a minimum standard of health and decency. They appear to be inadequate by an amount of £4 to £5 per month. In terms of the Salisbury Reduced Standard an approximate 65 per cent of families of this size received less than the minimum income required. It would be incorrect to assume, however, that a mere raising of income by the amount required would produce an expenditure pattern conforming closely to that of the P.D.L. The Effective Minimum Level technique suggests income would have to be raised by a considerably larger amount.

A comparison of what households actually spend on different items shows they fall short of the P.D.L. requirement in food especially. Expenditure on food for the second to fourth quintile groups is £5 19s. 6d., £7 3s. 10d. and £7 13s. 1d. respectively. This is roughly £4 per month less than the P.D.L. requirement. Expenditure on clothing and footwear ranges from 18s. 3d. to £1 14s. 6d. (average £1 4s. 8d.) per month against the £1 14s. in the P.D.L. calculation. Expenditure under this head in the 4th quintile

group equated with that of the P.D.L. Expenditure on fuel and light was approximately 9s. 6d. in the budget study, but was calculated at £1 5s. 9d. in the P.D.L. This, therefore, is considerably less. Thus the standard of food intake and of fuel and light would appear to be considerably lower than that suggested as minimal in the P.D.L. The method of calculating the Salisbury Reduced Standard ensures that actual expenditure conforms more closely to this standard.

The difference between actual expenditure and the theoretical P.D.L. minimum expenditure on food is roughly £4 per month. In a four-person household this amounts to approximately £1 per head, which, at the level of expenditure under discussion is considerable. An analysis of the Salisbury study for unrationed households (C.A.S.O., 1958, p. 10) shows the average food expenditure per man unit to be, for the respective quintile income groups, £1 12s. 8d., £1 12s. 4d., £1 18s. 10d., £1 17s. 10d. and £2 2s. 8d. There appear to be three distinct phases in this series—the 1st and 2nd quintile group, the 3rd and 4th and lastly the 5th quintile group. The Salisbury P.D.L. gives an approximate requirement of £3 8s. per man unit per month on food. The fact that this cannot be viewed as markedly excessive is shown by the Salisbury study of single unrationed men (i.e. one man unit) whose average expenditure on food over all quintile groups was shown in Table 9 to be £3 5s. 4d. per month. If the P.D.L. minimum does in fact overstate requirements it must do so in respect of women and children and also in the amount of saving effected by cooking for a household, as distinct from an individual. Even if possibilities of this kind are admitted, they cannot account for the difference between man unit expenditure on food of single men (£3 5s. 4d. over all quintile groups) and family households (from £1 12s. 8d. in the 1st quintile to £2 2s. 8d. in the 5th quintile). The evidence strongly suggests that expenditure on food is inadequate among the majority of African family households in Salisbury. An examination of the Blantyre-Limbe material shows approximately the same conditions to exist. The P.D.L. minimum expenditure per man unit is £1 19s. 8d. per month. The actual per man unit expenditure (average for the three seasonal studies) is wage category (a) 17s. 7d.; wage category (b) 20s. 7d.; wage category (c) 19s. 9d.; wage category (d) 32s. 2d. No budgetary studies of single men were made.

If this conclusion is read in conjunction with that concerning the purchase of non-edible items, i.e. on a *per capita* basis, family households spend very much less than do single men on non-edible items, some indication of the plight of African families under wage rates current in Central Africa may be envisaged. It is this that answers the problem of how in fact people do exist when income is less than minimum needs. They cut down on food expenditure by an amount approximately 33 per cent of theoretical minimum needs per month for a family of two adolescent or three younger

children; expenditure on clothing equates in general terms to the P.D.L. minimum, but on other non-edible items it drops considerably lower than the P.D.L. requirement; the diet tends to be monotonous and is weighted heavily towards mealie meal even in the higher income groups. As experience in prisoner of war camps and other extreme circumstances amply shows, the human body can successfully endure considerable privation for long periods. However, in the long run, privation becomes manifest in the form of high disease rates, fatigue, irresponsibility, inefficiency and a host of indirect factors a fully developed economy cannot afford to bear. Many households are apparently 'getting away with it' but there is no margin of safety for the families concerned nor peace of mind for the employer or for the political leaders of the community.

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FISHERMEN OF THE ZAMBEZI

An Appraisal of Fishing Practice and Potential
of the Valley Tonga

by

THAYER SCUDDER

Editor's Note

THIS article is the result of field work conducted by the author as a Research Officer of the Rhodes-Livingstone Institute from September 1956 to September 1957. It was originally written as part of a full length book on the human geography of the Gwembe Valley at present under preparation: this will be a companion volume to Elizabeth Colson's book on the social organization of the Gwembe Tonga, currently in the press. It was decided to publish this section of Mr. Scudder's work in advance, so as to correct a popular impression that the Tonga are poor fishers. This idea has indeed found record in the scientific press, where Dr. Tobias reports 'the swift flow of the Zambezi, the fear of crocodiles and the near absence of fishing techniques and traditions have ruled out fish as a source of nutrition', *Man*, 1958 : 88. From this it might be concluded that the Valley Tonga would be unlikely to make the most of the new source of food and wealth made available to them by the creation of Kariba Lake, and that in consequence the authorities would be justified in granting fishing concessions to outsiders. The facts presented in this article will enable the necessary decisions to be made in the light of full knowledge of the situation.

(H. A. F.)

Because of the growing interest among certain Europeans and Africans in the fisheries potential of Lake Kariba, it is important to correct the widely held opinion of the Valley Tonga as indifferent fishermen. Based on observations that the people rarely fish the Zambezi channel, this opinion ignores the fact that the rapid rate of flow of the undammed river restricted fishing to the river's banks and floodplains, and to its major tributaries, most of which flow only six months out of the year. It also fails to realize that the Middle Zambezi flood is confined to tributary deltas and to a narrow strip of river bank alluvium seldom more than 300 yards wide, with the result that even during the height of the flood the maximum area that could be fished is insignificant in comparison to the flooded Kafue Flats or Barotse Plain. While these limitations precluded the development of a specialized fishing economy in the Gwembe,

this does not mean that the Valley Tonga made no attempt to exploit the fish resources of their environment. Quite to the contrary, they considered fishing a respected part-time activity in which a wide range of techniques were utilized to procure fish throughout the year.

The Valley Tonga fish because they desire and occasionally crave fish as an adjunct to a high carbohydrate diet. They also fish because they enjoy the recreational aspects of fishing, especially when a large number of women participate in a drive or when members of both sexes gather to fish a backwater. During the main fishing season, from December-January to June, fish is an important source of animal fats and protein; in villages close to the Zambezi channel, women not infrequently leave their gardens during the heat of the day to basket fish. Although the rewards of this form of fishing are less between July and November, some women and children continue to fish off and on throughout the year, their efforts periodically supplying fingerlings, supplemented by the occasional mature fish, for the evening meal. Men with night lines and fixed scoop nets placed in the Zambezi channel also catch fish during the off season, as do parties fishing deep pools in tributary beds through the use of vegetable poisons. When more than enough fish are caught by these techniques, as well as with other techniques used during the main fishing season, the surplus is bartered or sold locally.

The following descriptions arise from my own observations when resident in the Valley from October 1956 to September 1957. Owing to climatic variation, not every method is practised every year, so in certain cases personal observation was supplemented by descriptions from informants. A year's residence and participation in village activities enabled me to assess the value of such information and that which is recorded is considered to be accurate.

Whenever the Zambezi flows between well-defined banks, scoop nets (*lusabwe*)¹ up to six feet long may be set in the main channel to snare one to four pound fish feeding along the river margin. Formerly constructed of *Sansevieria* fibre but now utilizing cotton thread, these hooped tangle nets are attached to a long pole secured, simply but ingeniously, to the river bank. In addition, children are often seen fishing the channel with hook and line, while men are accustomed to set night lines for catfish, vundu and eel, baiting their hooks with frogs, grasshoppers, and manure grubs. Though most hooks (*kalobo*) today are of European manufacture, Living-

¹ For a detailed description of the manufacture of Valley fishing devices, see B. Reynolds' forthcoming volume to be published by the Rhodes-Livingstone Museum which covers the material culture of the Valley Tonga. Within the limits imposed by the division of labour between the sexes, most devices can be made by anyone who takes the time to master the necessary techniques. The exceptions include large barriers, and perhaps the large valved traps (*twabula*) placed in the Zambezi channel, which some informants claimed could only be built by people who had dream-inherited the necessary skill.



PLATE 1 (a) *above*. Women's fish baskets (*izubo*) outside a Valley Tonga hut.

(b) *below*. Cane barrier with fish traps across dry Zambezi tributary.





PLATE 2 (a) *above*. Women and children fishing with fish baskets (*izubo*) and thrust baskets (*isompo*) in a flooded Zambezi backwater.

(b) *below*. Women driving fish into baskets (*izubo*) placed across the lower reaches of the Chezia River.



stone (1865: 220) found African-worked barbed fish hooks in the Gwembe in 1860, while MacLaren (1958: 27) refers to two barbless hooks, (one copper and the other iron), in the Gwembe collection of the Rhodes-Livingstone Museum. According to one 1957 informant, such were made by the same smiths who wrought the characteristic hoe blades of the Tonga cultivator.

As the Zambezi begins to rise after the advent of the rains, large valved fish baskets (*twabula*) are staked out above the water level in channels connecting depressions in the river bank gardens (*jelele*). As the water continues to rise during the first few weeks of the rains, fish are trapped whenever they attempt to enter these depressions, the trap being removed before the water spreads on either side. Still later, during December and January, large numbers of adults and children gather to fish the now flooded depressions and stream beds which back up degradation terraces throughout the alluvial floodplain. Strictly voluntary aggregates, these fishing parties occur when someone's suggestion that the fishing might be good at a particular spot is enthusiastically endorsed by others who pass the word as they set out for the desired location. In this way, the news is passed from village to village, with the result that over a hundred people may eventually gather. Although the fishing proceeds without supervision, a number of spear men may advance through the water in a semblance of a line, jabbing their weapons in likely spots as they proceed. Similarly a number of women may co-operate by dragging several fish baskets (*izubo*) end to end through the shallows, or by driving the fish into the baskets by beating down on them from a distance. Similar to the woman's fish basket throughout Central Africa, these *izubo* are made in several sizes all of which are admirably constructed to trap fingerlings, which, of course, make up the larger proportion of fish by weight. Like the thrust basket (*isompo*) which may be used by both sexes, the woman's basket is used throughout the year. In between these large fishing parties (which first occur when the major backwaters fill up, and are then repeated when the water recedes after the end of the rains), women and children are frequently seen manipulating their baskets through the grassy backwaters. Working alone or in groups, women also basket-fish the lower reaches of the major tributaries as the Zambezi flood recedes, occasionally co-operating to place their baskets across the entire channel. Still later in the dry season, they drag cut off pools in tributary deltas and along the margin of the receding Zambezi where basket fishing continues until the advent of the rains when attention is once again turned to planting and cultivating.

Towards the end of the rains, when the danger of flash floods is slight, fishermen renovate or build new barriers across the middle and upper reaches of tributaries. Depending on the building material available and the preferences of the builders, these may be constructed of cane fencing reinforced with brush and the remains of

old fish baskets, or of rock. In the former case a number of conical, valved traps (*mungwala*) are placed at scattered points along the length of the barrier, their entrance facing upstream or downstream depending on which way the fish are running. As opposed to cane, stone is used in barrier construction across rocky narrows, with a single trap (*isasa*) placed in the centre of the tributary where the converging rock walls come together at an obtuse angle. Unvalved, these traps consist of a long, narrow conical basket of stalk construction which is suspended in the rock sluice from a scaffolding of branches. Fish funnelled through the entrance are retained by the rapidly flowing current which passes through the basket floor as through a sieve.

Along the lower tributary reaches, where the width of the channel and the depth of the water backed up by the Zambezi flood precludes barrier construction, still other techniques are used. When the Zambezi's remarkably silt-free flood waters advance slowly up tributary channels, men spear fish at night, obtaining, with the aid of torches, those larger species which move in with the flood. On two separate occasions, informants agreed that this technique is never used when the flood waters begin to recede, since fishermen would muddy the water, hence obstructing vision, by stirring up the thin layer of fine alluvium deposited after the initial advance of the flood waters. No night spear-fishing took place in 1957 because of the extremely rapid March rise of the Zambezi. Normally, when the flood water recedes, both in tributary deltas and channels, as well as along the margin of the Zambezi itself, shallow portions are cut off by simple dams of mud or sand (*lukome*), the women later scooping out trapped fish with their baskets. If the water is too deep for this, they may speed matters up by shovelling the water out with their hands or with containers to the rhythm of their singing. At the same time, flood water in shallow depressions and streamlets throughout alluvial floodplains may be drained through a small cane barrier in which no traps are placed, the fish being stranded when the water runs out. The barrier itself may serve as a sieve or it may contain a small pocket sieve (see MacLaren, 1958: 8). Where it is doubtful that the water will run out before the advent of the rains, a valveless basket (*ingomamulongo*) may be inserted to catch fingerlings swept in by the outflow.

In the case of deep pools in tributary beds which cannot be effectively drained or efficiently fished with baskets and scoop nets (*kasabwe*) before the arrival of the rains increases their depth, fishermen may use stupefying vegetable poisons. Although I never observed a poisoning party, informants queried in many parts of the Valley claimed that the proper mixture of mascerated leaves and chips of wood were effective within hours, the exact number depending on the species used and the size and depth of the pool poisoned. A list of poisons, along with their botanical identifications where known, is included in Table I. The particular species

used vary in different parts of the Valley according to their local availability and the preferences of the people concerned.

TABLE I: Vegetable Fish Poisons

Tonga name	Scientific name ¹	Other species used in poison mixture	Portion used
<i>moba</i>	<i>Acacia nigrescens</i> Oliv.	<i>chiwawa</i> , <i>intindili</i> and <i>soswe</i>	Stamped bark and (?) seeds
<i>intindili</i>	<i>Neorautanenia</i> sp.	As above	Root chips
<i>chiwawa</i>	<i>Euphorbia ingens</i> E. Mey	As above	Stem latex
<i>soswe</i>	<i>Courbonia glauca</i> (Klotzsch) Gilg and Ben.	As above	Leaves and branches
<i>imbwayuma</i>	<i>Adenium multiflorum</i> Klotzsch	<i>muunga</i> , <i>soswe</i> and <i>musezio</i>	Root and stem chips
<i>muuga</i>	<i>Acacia alba</i> Del.	<i>imbwayuma</i>	Seedless pods
<i>musezio</i>	Undetermined	As under <i>imbwayuma</i>	Unknown
<i>musumba</i>	Undetermined	Unknown	Unknown

Although I have no data on this point, *Euphorbia tirucalli* L. and *Tephrosia* sp. may also be used as fish poison in the Gwembe Valley hinterland.

¹ I am indebted to Mr. R. B. Drummond of the Branch of Botany and Plant Pathology, Federal Ministry of Agriculture, for botanical identifications.

Granted the large number of techniques available to the Valley Tonga for snaring fish, it should not come as a surprise that the people are familiar with all but one of the sixteen genera which I observed in the Gwembe during 1956-7. The one exception was *Barbus* which is rarely seen since it is found almost exclusively in the swifter waters of the Zambezi's primary channel. Supplying names to representatives of the other fifteen genera, the Valley Tonga also make terminological distinctions between certain species (Table II), although others are lumped within a single category. Lack of a specific name does not necessarily indicate that differences in form go unnoticed. Indeed, acute observers occasionally pointed out morphological differences which for unknown reasons did not warrant separate names for the species involved.

Although the utilitarian and recreational aspects of fishing are foremost in the Valley Tonga mind, a small amount of ritual is associated with certain techniques. Some spear fishermen, like big game hunters, have dream-inherited their skill from a specific ancestor to whom they pour occasional libations at an associated shrine. When a woman in Chipepo's Chieftaincy desires a new fishing basket (*izubo*) she notifies the men of the village of her need, offering them a pot of beer or a fowl in exchange for their labour.

TABLE II

Middle Zambezi Fish

Scientific name ¹	English name	Tonga name in Middle River region
<i>Protopterus annectens</i>	Lung Fish	ikona ²
<i>Mormyrops deliciosus</i>	Cornish Jack	muyanda
<i>Marcusenius</i> ³ <i>discorhynchus</i>	Parrot Fish	manquela
<i>Mormyrus longirostris</i>	Elephant Snout Fish	amalompi
<i>Hydrocyon lineatus</i>	Tiger Fish	mupenzi
<i>Alestes imberi</i>	—	mumbele
<i>Alestes</i> sp.	—	—
<i>Distichodus schenga</i>	—	kafulofulo or kaile
„ <i>mossambicus</i>	—	jenga
<i>Labeo altivelus</i>	Carp	mutuba
„ <i>congoro</i>	Carp	mucise ⁴
<i>Clarias mossambicus</i>	Catfish	mubondo
<i>Clarias</i> sp.	Catfish	—
<i>Heterobranchius longifilis</i>	Vundu	muzunda
<i>Eutropius</i> sp.	—	sijiye
<i>Synodontis zambesensis</i>	Squeaker	chinzekenzeke
<i>Malopterurus electricus</i>	Electric Catfish	chikwinya
<i>Anguilla labiata</i>	Fresh Water Eel	mukunka
<i>Barbus</i> sp.	Gorge Fish or Yellow Fish	— ⁵
<i>Tilapia mossambica</i>	Three-spotted Bream	muchehe
„ <i>melanopleura</i>	Red-breasted Bream	mudile

¹ I am indebted to the following members of the Northern Rhodesian Department of Game and Tsetse Control for the scientific determinations: P. B. N. Jackson, Senior Scientific Officer and Officer-in-Charge, Joint Fisheries Research Organization, Fort Rosebery; D. Harding, Scientific Officer, J.F.R.O., W. A. F. Winkworth, Fisheries Officer, Mazabuka, and M. A. E. Mortimer, Fish Culturist, Chilanga.

² Of all the species observed in the Zambezi and its backwaters, this was the only one that the Valley Tonga refused to eat.

³ Specific determination uncertain.

⁴ Not all adults are capable of making this distinction. Those who cannot, refer to this fish as *mutuba*.

⁵ Valley residents queried in one village were unfamiliar with this species, confusing it with *Labeo* sp. Since I only saw one specimen, I was unable to test the knowledge of many informants.

Once the men gather, the one who is chosen to initiate the construction is supposed to carry out a brief ritual as soon as the stick framework has been bound together with fibre, but before the trap is actually shaped. Where the woman's payment is a fowl, the initiator despatches it by beating it up and down the length of the stretched out frame, all the while exhorting the basket to secure for its future owner many bountiful yields. Where beer is supplied rather than a fowl, the initiator spits a mouthful on the basket at

the time of his exhortation. The next of a series of three rituals occurs when the woman takes her finished basket to the fishing grounds. Scooping up a mouthful of water and then ejecting it, she too urges the basket to function well, after which she proceeds to test its worth. The first catch should be given to the initiator, who undertakes the final ritual exhortation by spitting a portion of the cooked fingerlings upon the basket. As opposed to the three rituals associated with the woman's fish basket, only one ritual is carried out for a new Zambezi basket trap (*twabula*), presumably because this, like the remaining traps, is made by its owner, who exhorts and spits over the device the first night he stakes it in the river.

A special spitting ritual (*kupila*) is also carried out whenever the people fish an area associated with a rain shrine (*malende*). In this case it is the local ritual leader (*sikatongo*) who must act as initiator, with no one allowed to fish until he has performed the appropriate ritual which includes thrusting his own basket into the water. At Mazila, in Simamba's Chieftaincy, I was told by the local ritual leader that no one was allowed to use fish poisons in the large, deep pool near the mouth of the Nangandwe River since this was associated with the rain shrine. If this prohibition applies to other shrine pools, it is the only instance where the right to fish large bodies of water is permanently restricted. While barrier owners alone have access to their catch, I believe that their rights over certain stretches of water are preserved only so long as they are actively engaged in fishing. On the other hand, if anyone wishes to build dams or a small barrier, or set a fixed trap in another's flooded garden, he is expected to ask permission. If this is granted, the petitioner should give the garden owner a small portion of his catch. With these few exceptions, people may fish where they please, even crossing political boundaries to do so.

Against this background interest in fishing, it would be unfortunate if the Valley Tonga were not given a chance to play a major role in the future Kariba Lake fishing industry. Although most fisheries officers to whom I talked considered the oft-quoted estimate of 20,000 tons per annum radical rather than conservative, most agreed that the Kariba Lake fisheries will be big business, with annual hauls exceeding the estimated 5,000 tons taken from Lake Bangweulu, and probably exceeding the 8,000 tons fished out of the Kafue in 1957. When the inevitable petitions from Europeans and Africans of other tribes are received, it is suggested that consideration should be given to the fact that the lakeshore fishing grounds cover the former homes of the Valley Tonga. It should also be borne in mind that owing to shortage of fertile land in the Northern Rhodesian resettlement areas, the day is not far distant when a substantial proportion of the resettled Valley Tonga will either have to support themselves on a non-agricultural basis or leave the Valley entirely. Well aware of this situation, the

Northern Rhodesian Government hopes that the problem of agricultural pressure on the land will be lessened by the adaptation of certain villages along the future lake shore margin to full-time fishing involving the use of gill nets set from boats. Although major changes in social organization must accompany any conversion of fishing from a respected part-time activity to a full-time occupation, there is little reason to believe that the Valley Tonga, with patient instruction, will not be able to make this transition. In 1956, a number of Valley Tonga already owned gill nets which they had learned to set across the lower reaches of several major tributaries between the March rise of the Zambezi and the river's subsequent fall. According to Mr. Basset at the Chaboboma Mission, his Valley Tonga school boys were capable of setting the mission's nets in the Chibuwe River after receiving instruction from African Fish Guards assigned to the Valley by the Northern Rhodesian Department of Game and Tsetse Control. In addition to the Mission nets, another net set in the Chibuwe belonged to Chief Chipeco who not infrequently caught over 50 pounds of fish a night, with occasional catches of over 100 pounds.

When I arrived in the Valley, one of the first requests I received from the villagers in the community where I camped was that I procure a gill net for their use. When I finally did acquire a net through the kindness of the District Commissioner, Gwembe, several villagers were eager to learn from the Chipeco Fish Guard the proper techniques of setting and repairing the net. Two of these, along with my Valley Tonga interpreter-clerk, were soon proficient in repairing even crocodile holes, while at least ten men learned how to set the net from dugouts in still water. Indeed, some of these men were so skilled in dugout manœuvring that they could set the net along the banks of the fast flowing Zambezi itself, though catches here did not prove profitable. Several miles up-river a number of Valley Tonga living near the Chezia River were equally conscious of the benefits of gill net fishing. When the District Commissioner provided another net, along with a small flat-bottom boat, a voluntary association of ten men was formed to use this equipment, while another man, assisted by several helpers, purchased his own net for private use. In both cases, the nets were set in the lower reaches of the flooded Chezia with catches of 40 to 80 pounds of fish not exceptional during March, April and May. These were hawked locally with some exported ten miles up the Chezia. Profits were set aside for the purchase of new nets.

While net fishing in the Chilola had not yet begun during my stay in the Valley, the senior headman of the neighbourhood focused on the river delta was seriously considering purchasing a net. Still farther up the Zambezi, I found two Valley Tonga at the mouth of the Zongwe independently gill net fishing the flooded lower reaches of the river on a full time basis. Manufacturing their own

corks and weights, both fishermen made efficient use of the nets. As elsewhere, the major catch was made during the night, with the men drying their haul and repairing their nets during the day. Gill net fishing was also observed on the Chimini River, and no doubt occurs, without my knowledge, along the lower reaches of other major tributaries. As for those tributaries where gill net fishing was noted, competing fishermen were quite capable of working the same stretch of water. On the lower Chezia the two fishing teams discussed freely the best places for setting nets, with one group allowing the other to fish its preferred location after its own net was severely damaged by crocodiles.

Fishing conditions, of course, will be tremendously improved when the lake is finally stabilized, especially since the Governments of both Northern and Southern Rhodesia have made arrangements to clear an estimated 243,000 acres along the lake margin to reduce the danger of net fouling.

Competent boatmen on the rapidly flowing Zambezi, the Valley Tonga should have little difficulty in setting their nets in Kariba Lake where net fishing will be profitable around the year¹ instead of during a four to six month period as was the case along the undammed river. Nevertheless, it would be unrealistic and unfair to expect large numbers of Valley Tonga to take immediately to lake fishing. Government may have to protect the peoples' interests during the transition period, which could last a decade, by reserving certain fishing grounds, easily accessible from the resettlement areas, for local use. Here it should be pointed out that it will also take time for indigenous and introduced species² of fish to adjust to lake conditions and to breed up towards the lake's carrying capacity. If this occurs before the Valley Tonga are ready to take up their options, it might be possible for outside interests to fish the reserved areas on a temporary basis provided the eventual rights of the local residents were safeguarded. When the Valley Tonga do begin to fish, there is no reason to expect that their participation in the fishing industry will prove any less efficient than African exploitation of the fish resources of the Kafue where the problem is one of over-fishing rather than under-fishing.

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¹ It is understood that a three month close-season, mid December to mid March, will be inaugurated.

² Starting in 1959, the Northern Rhodesian Department of Game and Tsetse Control intends to introduce forty tons of *Tilapia melanopleura* and *T. macrochit* into the northern portion of Lake Kariba over a four year period.

CHANGES AND CONTINUITIES IN AFRICA

A Review Article

by

C. FRANTZ

Social Change. Josiah Mason Lectures delivered at the University of Birmingham. By H. IAN HOGBIN. Watts (London, 1958). Pp. 257. 21s.

Africa: Its Peoples and Their Culture History. By GEORGE PETER MURDOCK. McGraw-Hill Book Co., Inc. (New York, 1959). Pp. 456. \$8.75.

Continuity and Change in African Cultures. Edited by WILLIAM R. BASCOM and MELVILLE J. HERSKOVITS. The University of Chicago Press (Chicago, 1959). Pp. 309. \$7.00.

Transition in Africa: Studies in Political Adaptation. African Research Studies No. 1. Edited by GWENDOLEN M. CARTER and WILLIAM O. BROWN. Boston University Press (Boston, 1958). Pp. 158. \$3.00.

WHAT is the nature of the *processes* of social and cultural change? How applicable are they to the African scene? Four differing but complementary books have recently appeared that provide a representative cross-section of contemporary work by sociologists, anthropologists and political scientists on problems of change. They reveal not only the strengths but also the weaknesses of the concepts and methods used to describe, analyse and infer changes in social and cultural life.

Hogbin's lectures are the most comprehensive in scope. He begins with an adequate, if not illuminating, discussion of the approaches among anthropologists to the study of change, and in this he follows Nadel and Firth in distinguishing social structure from social organization. Since the static bias of historical studies has led many an investigator to miss seeing that reintegration occurs as widely as disintegration, it is necessary to consider social change in relation to social continuity. Hogbin takes issue with the applicability of Leach's view that much social change oscillates between two 'models'. On the contrary, it appears that most change today is progressive and one-way. The use of a longer time perspective enables the student to make such an assessment.

Although only a handful of references are made to Africa, Hogbin manages to quote or cite the majority of the leading anthropologists of the West today. Herskovits, even more than Leach, comes out as the bogeyman, not only in regard to 'cultural determinism',

but, more seriously, in terms of the inadequacies of the concept of 'cultural focus' (or 'focal interest'). Hogbin questions Herskovits' statement that change is more likely to occur in the area of focal interest. More seriously, Herskovits is charged with confusing three discrete referents to the concept of cultural focus: relationships, cultural objects and institutions. But Hogbin, following Malinowski in particular, also postulates that a number of 'foci of implicit values' are common to most societies—efficiency, security, freedom, comfort and prestige—although the range of preferences for these values is variable. In his view, social and cultural change can most profitably be analysed in terms of institutions.

Hogbin's work adds little that is new either substantively or theoretically, as those familiar with his previous writings will see. He employs a quasi-Frazerian hunt-and-peck approach, even though he mainly examines material from Melanesia. I took up the book hoping for some theoretical enlightenment, but three readings has brought me little satisfaction.

Some of Hogbin's rare generalizations seem to be extremely doubtful; for example: 'All people esteem mechanical efficiency . . .'; 'A dominated group that feels superior develops a revivalist movement from the moment of defeat'; and 'Sorcery tends to diminish in significance as the central government becomes stronger'. The absence of any indication of familiarity with American sociological theories on the problem of change, and of any mention of Sapir's enlightening study on *Time Perspective*, may be noted. Hogbin says that the future may be predicted only at short range; yet he concludes by forecasting the 'death' of many primitive cultures, and probably of Western industrialization and civilization as well (just as Roman and Egyptian cultures had 'died'). One may be permitted to question his concluding sentence: 'A growing knowledge of the processes of social change should enable our successors to plan something better to take its place.' Altogether, it may be asked whether this book was necessary.

Hogbin's muddled approach is not paralleled in Murdock's study, even though their purposes and contents vary. Murdock undertakes to provide the first systematic treatment in English of all African and Madagascan societies. This is done within a regional and culture historical framework. The book emanates from long experience in teaching a course on Africa rather than from field work, yet the author is abreast of the latest developments in linguistics, physical anthropology and the analysis of social structures. The chapters are short and succinct but they contain excellent selective bibliographies. A complete tribal map and an index of African tribal names and synonyms will prove invaluable for the research worker.

The scope of the work is from about 5000 B.C., when the first 'Neolithic agricultural civilization' appeared in Egypt, to about

1900, when the era of European penetration into Africa began to terminate. Thus, no attention is given to the long prehistoric sequences of 'Palaeolithic cultures' or to modern social and political developments. The discussion revolves selectively upon 'food-producing activities, the division of labour by sex, housing and settlement patterns, kinship and marriage, the forms of social and political organization, and a few miscellanea . . .'. Excluded from systematic treatment are music, art, religion, socialization and technology. Murdock gives the first inclusive classification of indigenous cultivated plants in Africa. He argues that historical and sociological research are not disjunctive, and the sources of evidence used in historical reconstruction are clearly and convincingly elucidated. After introductory chapters on general orientation, the data are analysed by 'cultural provinces' in an order that introduces the major developments in African cultures in their approximate post-Palaeolithic chronology. All of these points, by the way, are stated unequivocally by the author in his introductory remarks.

Basically, Murdock is not interested in the *processes* of change, but rather in the *results* of interaction in past times that may be inferred from written documents, archaeology, linguistics, botany and the distribution of plants, the distribution of elements of culture in *contiguous* areas and the probable modifications in social structure through time. In the last technique, he follows the method of analysis employed in his earlier work, *Social Structure*. Some interesting and perhaps debatable reconstructions have been made that, correct or not, should provoke much research. For example, he challenges Gluckman's interpretation of the historical depth of the Barotse system of bilateral descent; he views the adoption of patrilineal descent by the Mashona as the consequence of the introduction of cattle; and he debates the validity of Radcliffe-Brown's interpretation of usages relating to Mother's Brother among the Bathonga and Mashona.

The obvious drawbacks in Murdock's study are its self-imposed limitations and its shortness. The chapters are compact but brief, and the reader may feel as though he were wading through one grand extended bibliography, lists of plants, and tribal names and synonyms. Yet the book has an unquestioned value as the starting point for more extensive research that, we hope, may include further studies by Murdock himself. A more explicit consideration of the processes—rather than the record—of social and cultural change would be particularly valuable. Historical research, however, may not be able to deal as effectively with *how* changes occurred as compared with *what* happened and *who* the probable sources and carriers of innovations were.

The sixteen contributors to *Continuity and Change in African Culture* demonstrate the nature of continuing changes, but the editors believe there is no evidence that African cultures will shortly or inevitably disappear. To them, as for Hogbin, understanding

is predicated upon a consideration of both continuity and change. Herskovits and Bascom suggest that the processes of cultural change in earlier times may be inferred from the contemporary and recent types of responses made by Africans. In their Introduction, the editors argue that the cultural approach is broader in scope than the sociological one. This is based upon an equation of sociological research with a single time plane, implying the debatable proposition that 'the cultural approach' can deal better with change than 'the sociological approach'. The validity of this assumption has been questioned by a host of sociologists, social philosophers, and even anthropologists.

This difficulty or bias is reflected in the content of the contributions to the volume. In fact, they belie the title as the social is analysed as frequently as the cultural. Unfortunately, the Introduction adds no clarification to the understanding of the differences and inter-relations of these conceptually distinct 'approaches'.

Five authors include the whole of the sub-Sahara within the scope of their discussions. Three deal with single cultures or societies and the remainder focus upon restricted aspects of specific cultures or societies. The research designs vary from an interest in ethno-history, seen clearest in Fuller's discussion of culture change among Africans in Mozambique, to the use of 'control' groups for making comparisons. Dorjahn's essay on the demographic aspects of polygyny is asserted to add a 'wholly new dimension' to social structural studies, although this opinion of the editors bespeaks parochialism. 'Practical' suggestions are seldom offered by the authors, although the French colonial administration is described as having failed to understand fully the intricacies between various parts of culture.

Greenberg continues his penetrating and clarifying contributions to African linguistics. 'Proto-Bantu' is stated to have been unified about 2,500 years ago. That its probable origin was among peoples in Nigeria and the Cameroons is supported by archaeological and palaeontological evidence. Both his 'language areas' and Merriam's 'music areas' closely resemble Herskovits' 'culture area' classification for the continent.

In Hogbin's lectures, social changes were postulated as due to a variety of 'causes': spontaneous internal changes, shifting population densities, the modification of the natural environment, the migration of a group into a new country, and the invasion by foreigners who possess superior tools, skills and knowledge. The contributors to the Bascom and Herskovits collection illustrate the importance of these and many other variables. As was true among other peoples in earlier periods, the Europeans have not only modified vocabularies, lingua franca, artistic and musical styles, plants, sex ratios and status structures. Other changes have been contingent upon an adaptation to a new ecology and to new neighbours: the desire to accumulate wealth and prestige, 'natural drift' as in

languages, the normal creativity of artists in playing with forms, the trading of slaves and the instability of traditional systems of authority and power in African societies. Dorjahn finds, on the other hand, despite the absence of extensive reliable census data, that the Christian missionaries and European traders and governments generally have not affected the frequency of polygyny throughout the continent.

The effects of Western economic values and systems and the growth in communication media are resulting in widespread differentiation, urbanization and secularization. Islamic and Indian influences are also discernible in older and recent times. Cultural and social changes are postulated in some cases to have accompanied population growth: but this in turn often reflected the consequences of the introduction of American and Asian crops, the ending of the slave trade and the appearance of Western medicine. The movement of labourers has not only affected the sex ratio in many places, but has also been a mechanism by which individuals belonging to different societies have been able to spread or exchange various elements of culture. Merriam's observation in regard to changes in African music suggests further inquiries in other aspects of culture and society: where similar structural features exist, he says, the greater is the likelihood of acculturation occurring.

Aside from the values and behaviour patterns introduced by Christian missionaries and educators—such as the emphasis upon patrilineal descent, the opposition to polygyny, economic 'individualism' and the 'Protestant' work ethic—the redistribution of power and authority by colonial governments is frequently cited by contributors to the Bascom and Herskovits volume. Sometimes, this redistribution is affected by new land and animal husbandry laws, by village resettlement schemes that limit political and kinship segmentation, by different conceptions of law among the indigenes and immigrants, and the fostering of change through the British system of 'indirect' rule. The differential effects of British and French colonial policies is best illustrated by Lystad's study among the Ashanti and the Agni in the Gold and Ivory Coasts. He finds that the most important variables upon acculturation are the degree of schooling and the extent of participation in government. In another case, the pacification of internecine war is seen as the crucial variable that stimulated a rise in external trade. Yet again, Islam was adopted by 5,000 resettled Mossi to help control the new environment in a situation where tribesmen were transplanted to a government-sponsored farming scheme based upon irrigation.

Social and cultural continuity is often due to the satisfaction of the traditional culture, as among the Pakot or Masai. Nilotic peoples seem less amenable to accepting innovations, Schneider suggests, not simply because they have a cattle complex, but because this complex is *combined with pastoralism*. In contrast to the Nilotes, the 'Bantu' societies seem more willing to accept change

both because they have been on the military defensive and have a cattle complex in *combination with agriculture*. Further study along this line would seem to be especially promising. Messenger and S. Ottenberg point to the presence in some cultures of the desire to gain wealth, education, Western clothing, jobs and titles as important motives for social and cultural change. The former adds that an unanticipated consequence of accepting Christianity has been the reduced effectiveness of negative supernatural sanctions upon behaviour. The doctrine of forgiveness 'allows' an increase in the frequency of stealing, lying, cheating and murdering among the Anang Ibibio.

S. Ottenberg shows perhaps the most sophisticated awareness of the multiplicity of variables affecting change. He aptly discusses the mutual influence of internal and external factors upon the Afikpo Ibo: the lack of a centralized political structure, the scarcity of European settlers, the failure of the British to stabilize the traditional system of authority, the encouragement of exchange in items of material culture, the increase in natural resources and opportunities for trade, the end of intertribal warfare, the traditional pattern of territorial mobility, the increase in population and the influence of missionaries upon beliefs and practices. All these impinge upon a society that already had emphases upon individualistic and village or other group competition for status and achievement, the presence of organizations based upon non-kinship criteria, the occurrence of urban centres, a traditional system of incorporating strangers, and a pattern of adjusting to different ecological conditions with relative ease. He concludes sensibly (p. 141) that 'Change is a function of the kind of external cultural forces which a society encounters and of its existing framework of organization.'

European immigrants are also seen by S. Ottenberg as sometimes blocking African political aspirations and development, even though the former have often been the carriers of Western political ideologies and value systems. This view is reflected in three of the four essays in the volume edited by Carter and Brown. In it, the focus is more clearly upon the artificially created political units that embrace multiple tribes and, sometimes, residents of European descent. Rosberg and Dvorin respectively discuss the problems of conflict and co-operation in the development of a supra-tribal political system in Kenya and in the Federation of Rhodesia and Nyasaland. Cowan analyses the difficulties of implementing Western political values and organizations in the local governments of Nigeria, while Apter and Lystad examine the emergent role systems in Ghana since independence was obtained.

These four essays focus, therefore, upon selected institutions, the technique Hogbin suggests as the most valuable for the analysis of change. All of them employ a temporal context but they are primarily interested in analysing components of the various political systems. Perhaps because of their theoretical attention, they are

greatly concerned with the changes encouraged by the force and coercion of governmental institutions and of particular personalities. Apter and Lystad use concepts derived from Levy's *The Structure of Society* to rank 'interrelated roles and membership groups in terms of their functional specificity or their functional diffuseness'. The British-inspired Constitution of Ghana is seen as a mechanism to provide for more specific political roles in order to eliminate the influence of individual personalities in the operation of government. Unless certain changes are introduced, 'practical difficulties' are envisaged by the authors.

Cowan writes of the relative absence of 'efficiency' and public 'honesty' in the local governmental institutions bequeathed to Nigeria by Britain. The three-tiered system of elected local councils (adopted from the United Kingdom) lacks traditional sanctions among Nigerians, hence the locus of power within the present system remains undefined. The biggest problem is to rally the public to accept the conciliar system in the face of a continuing large measure of support for the traditional authorities. The regional legislative assemblies are too remote from the people, he says—a striking example of significant social changes that are not accompanied by equally great changes in culture.

Dvorin examines some of the problems of emergent federalism in Rhodesia and Nyasaland, particularly the division of powers, the Federal Civil Service, the African Affairs Board and the political parties; but little emerges of theoretical value. In a more extended discussion of similar problems in Kenya, Rosberg points to the difficulties inherent in colonies with numerous European settlers: disparities in power, technical ability, knowledge, capital, organizational techniques and status within the larger system. The struggle for representation in Kenya is examined within the context of increasing racial consciousness (abetted by separate electoral rolls and an absence of common loyalties), African nationalism elsewhere, urbanization and the frustrations of interracial co-operation within politics and government. The Africans' cultural background and the Europeans' wish not to assimilate Africans combine to restrict the latter's access to wealth, prestige and the learning of techniques and facilities of the system, especially the entry into positions of informal influence. British 'empiricism' is seen as fostering fears and doubts among Africans, Asians and Europeans, and the growth of a tribal parochialism that is only gradually being overcome through acculturation. All in all, Kenya is a case study in the efficacy of enforced and controlled culture change. As in Rhodesia and Nyasaland, the traditional and decisive divisions in the political structure are based upon race. 'To provide for stability and order,' says Rosberg, 'requires a new basis for consent which, in turn, will be dependent upon the power relationships evolving in the territory.'

To conclude, what have these many studies added to our know-

ledge of the processes of social and cultural change? Murdock's historical reconstructions (not his descriptive material) are based largely upon inferential and unwritten sources, and they are not concerned with an analysis of process *per se*. The other three books are not co-ordinated around any organizing theme or theoretical framework. Hogbin's lectures are discursive and of little value in planning future research. The book edited by Carter and Brown is interesting but primarily descriptive. Only the chapter by Apter and Lystad attempts to examine an institution in terms of the categories of a general schema; the use of scores, however, to quantify the degree of role specificity seems to obscure more than it enlightens. Finally, the methodologies and interests of Bascom and Herskovits' students are variable, but, in general, the level of their research is satisfactory. They remain tied to the analysis of change within small communities or tribes; yet they have interested themselves in the actual choices, alterations or deviations in the behaviour of individual members within a particular society or community.

The conceptual distinctions between society and culture are far from uniform in these four volumes. In contrast, more agreement is shown on the question of change vs. order. Despite the cavil of Bascom and Herskovits, most of the writers indicate that the 'structure vs. organization' or 'statics vs. dynamics' dichotomy is less fruitful than an approach that conceives of social relations as always in the process of being and becoming. A long time perspective allows Murdock to formulate generalizations about the *direction* of change or 'evolutionary' developments. For others, particularly the four authors in the Carter and Brown volume, the direction of change is neither clearly demonstrated nor fully certain. Both Hogbin and the contributors to the Bascom and Herskovits edition are aware of some of the directions of change within particular societies, but few essay any generalizing conclusions.

Several writers in these volumes comment upon alleged characteristics of many African societies. Whereas Carter and Brown speak of the tendency of unitary and centralized government to follow from the British parliamentary system in Africa, and whereas Apter and Lystad speak of a 'dangerous' consequence of this in Ghana, others emphasize inherent 'deficiencies' in African political organization. Cowan speaks of the lack of 'efficiency' and the public 'dishonesty' in local Nigerian government. Hogbin mentions organized 'graft' and Murdock speaks of 'African despotism'. The latter enthusiastically endorses Wittfogel's argument in *Oriental Despotism*, despite the criticisms that have been made of the original thesis. An ethnocentric bias seems clear in all of these comments that might be eliminated if, for example, more attention were given to such concepts as latent structure and function, reciprocal financial and social obligations in a political system, and 'functional alternatives'. Hogbin points out (p. 70), 'In

pre-industrial class societies the persons belonging to the higher strata usually owe their wealth in part to a right of appointment to administrative posts that carry great financial rewards.' But, he adds, 'They can often supplement it by organized graft' [sic]. It might be asked, 'By whose standards is this system characterized by graft?'

The type of situation investigated by Hammond and by Lystad appears to be most amenable to significant research upon dynamic processes. It approximates what Eggan has called 'the method of controlled comparisons', and it has received the endorsement of Murdock, Hogbin, Nadel and Schapera, among others. That the chapters by these two authors remain more idiographic than synthetic seems to result from cultural anthropology's greater interest in contextualization than in making sociological generalizations from cross-cultural comparisons. It is this choice of emphasis that has brought criticism, particularly in the United States, from the grand old men of generalization, the sociologists. But as the latter, together with economists and political scientists, increasingly do research among non-Western peoples, then the emergence of more useful and valid generalizations about social and cultural change would seem to be probable. Yet they and the anthropologists will need to have a greater consciousness both of time (discrete events in defined groupings) and theory (causation may need to be restored as a legitimate inquiry) if the *processes* of change are to be systematized, and if we are to move beyond the *cul de sac* of merely describing the 'end' products or content of particular cultures or societies that are experiencing change.

MYTH IN MODERN AFRICA

A preliminary report on the fourteenth conference

THE 14th Institute Conference was held at Lusaka from 26th to 29th February, 1960, and took as its theme *Myth in Modern Africa*.¹ Instead of the usual mid-week sessions, the innovation of running the Conference over a weekend proved successful and may well be again adopted in the future.

The number that can be invited is limited, in the first place by the capacity of the seminar room, and secondly by the fact that with too large an attendance it is difficult to maintain the intimate atmosphere of a discussion group. The average attendance was around 40, including the Institute's own staff, European and African, and representatives of Government Departments, mission bodies and associate and affiliate members of the Institute.

Academic institutions were represented by Professor M. Wilson, from the University of Cape Town; Dr. Biesheuvel from the National Institute of Personnel Research, Johannesburg; Dr. Holleman from the Social Research Institute of the University of Natal; Drs. Cyril Rogers, Ioan Lewis and Jaap van Velsen from the University College at Salisbury; M. d'Hertefelt from l'Institut pour la Recherche Scientifique en Afrique Centrale at Astrida, Ruanda, and Dr. I. Richardson of the School of Oriental and African Studies, London.

A high standard of papers and discussion was naturally expected from such a group, and in this we were not disappointed. As it will be some time before the Proceedings are available, and as in any case potential purchasers will wish to have some idea of the contents, brief summaries of the papers are reproduced below.

In opening the Proceedings, the Governor of Northern Rhodesia, Sir Evelyn Hone, who is president of the Institute's Board of Trustees, pointed out how numerous myths contribute to mutual misunderstanding in multi-racial communities, and welcomed the fact that the Institute was subjecting the problem to scientific analysis.

The Director, in introducing the theme of the Conference, emphasized the difference between the physical and the social sciences. In the latter, as distinct from the former, a fact may be demonstrably false, yet, if the demonstration of its falsity is rejected, it is a fact which may motivate human behaviour, and as such must be studied by the social scientist. A case in point is the East African railway strike from 13th to 28th November, 1959. The investigation into the cause of this strike, alleged actions of a building superintendent, revealed that in every case the facts were distorted or grossly exaggerated

¹ A complete report of the Conference will be issued in the series *Conference Proceedings*.

and that in not one of the cases could the allegations against the building superintendent be substantiated. None the less, the railways were brought to a halt, and wage payments ceased for 15 days. A subsequent paper underlined this point by quoting W. I. Thomas as saying 'if men define situations as real, they are real in their consequences.'

Mr. Fosbrooke further stated that although it was the formalized myth, e.g. the Tiv myth, which first attracted the attention of the social scientist in Africa, the papers and discussions would not be limited to those myths which performed the function of underpinning African social or political systems, but that equally the Conference should consider the development of myth in modern conditions. The subjects of the papers reveal how widely the Conference ranged in its deliberations.

Professor Wilson in her paper *Myths of Precedence* defined myth as an account of past events told as fact, but which could be shown to be partly fictitious; myths purport to explain existing relations in terms of history, and also provide a moral basis of a social system. A myth should be distinguished from an allegory or parable whose truth is recognized to be symbolic, not literal.

The myth found amongst the Nyakyusa that the ruling class were responsible for the introduction of fire, iron and certain agricultural crops could be matched by similar myths from many parts of Africa. Similarly, the speaker's own people, the white South Africans, sought to justify their position as the introducers of culture in South Africa: as a corollary they had to deny any manifestation of culture in the original inhabitants. This in spite of the weight of evidence to the contrary, for instance the record of a party shipwrecked on the Natal Coast in 1686 which revealed a stability in the field of law and order greater than that reigning in Alexandra Township or Cato Manor to-day. This line of thought led on to the Settler Myth whereby, in areas so far apart as North America and South Africa, the immigrant people justify their position by asserting that they entered an empty land. Again, as far as South Africa is concerned, the speaker was able to produce historical evidence to the contrary which showed the position of the Xhosa in 1686, 1702 and 1772.

In summarizing, Professor Wilson emphasized that a myth could not be invented out of nothing, and that to catch on it must express some social reality, the needs or aspirations of some group or community.

CENTRAL AFRICA

A group of papers was presented which dealt with Central Africa, some on a general basis and others confined to specific tribal subjects.

The Rev. F. J. Sillett, Rector of St. George's, Luanshya, and Chairman of the Executive Committee of the Ecumenical Centre at Mindola, read a paper on *The Mythical Dialectic in Central Africa*.

After setting the scene against a background of the "Christian Myth"—a phrase which some regarded as a contradiction in terms when a definition of myth was discussed—the speaker went some way towards answering one of the points that the Governor had raised concerning the suspicion with which Government's actions were so frequently viewed. This, thought the speaker, arose from the disillusion suffered by the African whose first impressions of the European sprang from their contact with the early missionaries bearing their message of the goodness of God and the equality of man, but whose subsequent experience revealed how far European culture fell short of its ideal. Mr. Sillett attributed the European myth of the African as an uncultured being of a lower order to the same cause as did Professor Wilson, namely a justification for the continued 'protection' of the African and his gradual advancement under the tutelage of, and at a pace to be decided by, a group of beings of a higher order.

Dr. Apthorpe, one of the Institute research officers, discussed three aspects of the subject *Mythical African Political Structures in Northern Rhodesia*: their current mythical representation, their factual nature and some possible reasons for the wide acceptance of this mythical representation when the facts are so readily observable.

Chieftainship is the particular topic of interest as it is the sphere in which the most active contact between indigenous and implanted systems is seen.

Examination of the statements of various administrators shows that although there is an awareness of the variation in the importance and influence of chiefs in different parts of Northern Rhodesia, there is a general belief in the myth that the chief invariably combines spiritual, administrative and judicial duties, and is the allocator of land. Dr. Apthorpe showed that this does not accord with the majority evidence for the greater part of Northern Rhodesia.

Another aspect of the myth which has been often expressed is that the 'African Tribal System' is 'autocratic, hereditary and hierarchical'. In the light of the facts, however, it is evident that in well over half of Northern Rhodesia, the Chief was *not* 'high priest, supreme judge and final ruler', but was subject to constitutional checks and balances. Furthermore, he was not beyond the reach of sorcery, shame or the moral sanctions applying to other members of the 'tribe' as the common myth of the prerogatives of chieftainship implies. If the chief was considered a bad chief, he either lost his following or was deposed or otherwise eliminated. He could also be criticized openly by a commoner of a clan linked to his by the system of 'joking relationship' (cf. medieval court jesters) in societies where clanship was the basis of political alliance.

One reason for the widespread belief in the mythical representation of African politics held by members of the group who benefit from it is associated with a 'defensive ignorance' engendered by

lack of contact, other than in a governor-governed or master-servant relationship between members of the two 'groups', especially in the rural areas.

Dr. Apthorpe concluded that it is significant that all the myths he had mentioned about African systems deny, contrary to all the evidence, the presence of any equality or individualism in them, and contend that the values of the immigrant culture are totally different, being egalitarian and individualist. This is the most dangerous political myth in Northern Rhodesia.

The subject of Mr. St. John Wood's paper *Administration and Myth—Central Africa* extended also to myth and nationalism. He said the greatest myth about administration is that administrative regulation alone can solve all problems. The need for co-operation between the people and their administrators is easily overlooked in the social conditions of Central Africa. No doubt a contributing cause to this is the system of indirect rule at present in force in Northern Rhodesia under which, Mr. Wood pointed out, local government development is inhibited. Myths due to groupism or nationalism are all the greater where, as in Central Africa, society is particularly heterogeneous. Vast social and economic discrepancies make this area all the more fertile for the biggest myth about nationalism, namely that nationalist politicians are concerned only with politics. Also in such conditions, resort to force as a means of action comes to be considered as worthy, even heroic. This makes the administrator's task, which is compromise and not the execution of ideals of political theory, an extremely frustrating occupation.

Mr. White, the Government's Land Tenure Officer, aided by his assistant, Mr. Chinjavata, gave a paper *Myth and Social Separation with reference to the Luvale and Portuguese Africa*. In speaking of inter-tribal myths in Northern Rhodesia they emphasized the possibly unique position of the Luvale in that whereas other tribes mythologize about the Luvale, the Luvale do not have a balancing set of myths about other tribes. As social separation is a considerable factor in the genesis of myth, for it is this which commonly leads to an exaggeration of social differences between 'groups', they argued that it is the rest of the world which is cut off from the Luvale rather than the Luvale from the rest of the world. Turning to Portuguese Africa, they noted that social myths among Africans and Portuguese in Angola, involving imagery one of the other, are conspicuously absent. They suggested this may be due to the notions and policy of assimilation in Angola, rather than to the process itself, for it has not yet proceeded very far. Lastly, Mr. White spoke on the Cape Verde Islands which he had recently visited. The peoples of those islands have a strong sense of common identity, and this is due to the common Creole culture which they share. Though Metropolitan Portuguese have myths about Cape Verdeans, particularly about their standard of living (though rural economic differences in the two countries are not markedly different), Cape

Verdeans do not mythologize particularly about Metropolitan Portuguese. Undoubtedly Cape Verdeans are characterized by a desire to minimize African cultural features and to stress their Portuguese cultural connections. In fact, it appears that myths entertained by Cape Verdeans are mainly about themselves.

A paper from Mr. Argyle, one of the Institute's field anthropologists now 'writing-up' in Oxford, was on *The Soli View of Europeans*. The tribal area of the Soli is adjacent to Lusaka. They customarily distinguish between the English, the Scots and the Afrikaaners, in particular contrasting the characteristics of the last two peoples. To sum up Mr. Argyle's description, the Soli regard Afrikaaners as more virile and more straightforward than the English, more like themselves and thus more easily understandable. To a large extent this attitude is accounted for by the humiliations the Soli experienced in their earliest experience of the English, and by a certain self-criticism which Soli voice when comparing themselves with Europeans of any kind. They say so often that they (the Soli and other Africans) are 'bad people', to translate literally, having particularly in mind their proneness to yield to envy and to give force to this through sorcery. Mr. Argyle also mentions that the Soli believe—to some extent on the grounds of their own experience—that there is still a European reluctance to share a common human status with them. They believe there is a basis for this in clanship, which they claim exists among Europeans. Europeans are said to conceal the names of their clans in order that they may also conceal their obligations to their fellow clansmen among the Soli.

LANGUAGE AND MYTH

Dr. Richardson, in his paper on *Language and Myth*, did not deal with the myths and folk tales which constitute the larger part of African oral literature, but considered his subject from two angles, (a) myths concerning the nature of language, and (b) myths as indicated, created or preserved by languages. His paper dealt mostly with the first aspect.

Myths flourish best when there is no way of discounting them, but also persist when there is evidence to the contrary. The arch-myth about language is that 'a language is an immutable structure built according to certain rules which must be observed on every occasion', whereas languages are, in fact, constantly changing through the usages of the people who habitually speak them. Other myths about language are that languages which have had little contact with urban civilization, such as most African languages, must be very 'simple', 'easy to learn', or 'hard to learn'.

The myth of the 'pure' language is also popular, and borrowing of foreign words is looked upon as adulteration of a language. In reality, languages are constantly borrowing words from each other, and this is necessary for the continued existence of each language.

Wherever there are linguistic barriers, social myths easily spring up on the fertile soil of incomplete understanding and the resentment felt when others 'do not speak like us'. These facts should be considered in the light of new factors entering into the situation in the modern African context and in multi-racial societies. A great number of the myths groups hold about each other would be removed with closer contact and observation, but human nature being what it is, they would not all disappear.

Mr. Rigby, the Institute's socio-linguist, also gave a short talk on *Language and Myth*. He suggested that in the Central African situation as in certain other parts of Africa, the different languages may contribute in considerably differing extents to the maintenance of mythical characteristics 'ascribed' to other groups. He was particularly concerned with language usage, rather than language structure, and with the phenomenon that in mythologizing about 'other' groups one feature is selected to stand for all their characteristics. In the main, Mr. Rigby chose his examples from the use of words which in dictionaries indicate colour, but in use in Central Africa and elsewhere, signify characteristics. 'Denigration' is an example of this.

Dr. Friedland, an associate of the Institute, from the University of California, presently studying Trade Unionism in East Africa under a fellowship of the Ford Foundation, submitted a paper on *Some Urban Myths in East Africa*. In addition to more general topics, Dr. Friedland dealt interestingly with certain subjects particular to his own field. In respect of strikes, he finds that the 'spontaneous' strike, attributed by some employers to 'bush-telegraph', in fact only appears spontaneous to the employers owing to their lack of communication with the workmen, who are aware of such 'spontaneous' strikes several days in advance. The myth that African workers are all inefficient because they have 'bad' eating habits, so demonstrably false, is held not only by Europeans, but equally by educated Africans, but for different reasons. In the first case it emphasizes the 'cultural lag' between the two groups, whilst the African leader maintains the myth, in spite of evidence to the contrary, to underline the extent of the wage differential.

Dr. Friedland's paper also filled a gap which the organizers of the Conference should not have allowed to occur, namely a discussion of the widely held myths of the type exemplified by the East African *mumiani* myth (see page 66). This, thought the writer, served the purpose of maintaining social distance between African and European. 'Children must be taught that Europeans are of a different and special breed—and dangerous!'

Dr. Friedland concluded by quoting the myth, perpetuated by Lord Malvern, when he said of the Nyasa people 'they still like a rough house, the rougher the better, in other words they like a riot' as a means whereby a group justified its actions and its

position in society (cf. the 'all Africans are liars' myth from the same source). The writer pointed out how such myths strained race relations and pleaded for more research in the first place, followed by greater publicity for the result of such research. This note is an endeavour to meet the latter point.

COMPARATIVE STUDIES

The conference was fortunate in being able to set the Central African problem against the broader background, drawing on experience from neighbouring African territories and from as far afield as Mexico and India.

Professor and Dr. Lilian Dotson, Fulbright affiliates of the Institute from Connecticut University presently studying the Asian communities of Central Africa, drew on their previous field work in their combined paper *The Democratic Myth in Mexico*. They examined the processes of government in an ex-colonial territory which, underdeveloped to a degree comparable with many African territories, had been managing its own affairs for the last 150 years. They concluded that the myth is that Mexico is a federal republic and a representative democracy, where the sovereign will of the people is translated into governmental action through a constitutionally defined procedure. The reality, they suggested, is that Mexico is a centralized state, under one-party control. Nevertheless, in spite of the gap between myth and reality, myth in this situation as in others has its positive functions. Ideologically the government is 'democratic' and 'progressive' in intent, and in the day-to-day relationship between citizen and government, it is reasonably so in practice. Mexico might be a very different place indeed if myths other than the democratic one could be appealed to by officials to legitimate their actions. If Mexico is not a democracy in the literal sense of the word, then neither is it a totalitarian state, and surely the fact that the democratic myth must be given at least lip service on formal occasions has had some role in conditioning the tone and quality, if not the basic structure, of the government.

To the degree that the newly independent African governments are faced with socio-economic conditions similar to those of Mexico, they will, the lecturers thought, inevitably fall short of being democratic. Yet the Mexican model also suggested that the nature of the political mythology which they formally adopt may be important too.

One of the outstanding contributions to the Conference was M. M. d'Hertefelt's paper on *Myths and Political Acculturation in Ruanda*. He considered the role of myths in the specific problems involved in the political evolution of the Kingdom of Ruanda, firstly in the traditional political system, secondly in the impact of

Western colonial presence and thirdly in the recent political developments up to the November 1959 riots.

In Ruanda the Tusi ruling caste comprised only 16 per cent of the population, the Hutu about 84 per cent and the Twa less than 1 per cent. The Tusi patrons granted their Hutu clients the usufruct, but not the ownership, of the cattle which served not only as a means of survival but as a lever to political control, establishing a system of internal compensation ideally working in favour of the Hutu but buttressed by a politico-religious mythology which gave the Tusi caste a celestial origin and a beneficial role but which deprived the Hutu of any means of improving their inferior position.

The colonial control did little for forty years to change the structure of Ruanda society to conform more with the Western egalitarian and humanitarian ideals, but since 1954 the gradual abolition of the clientship structure resulted in the brisk spread of these ideals among the Hutu group and began a breakdown in the myth of the 'unity' of the Ruanda nation. The Tusi leaders tried to counteract this by an attempt to resuscitate the mythology of their 'divine right' to control, and this was echoed in the ideas of the Hutu leader Gitara with the modification that all the people of Ruanda had a common ancestor Kanyaruanda, and thus all must be brothers and equal. It was the total collapse of these mythical reinterpretations of traditional society that led to the violence in 1959.

Thus myth appears under three formal aspects in the political development of Ruanda: (1) ancient type or traditional Ruanda myth, (2) reinterpretations of the former and (3) expectations deriving from Western political and religious ideas.

The issue of *mumiani* raised in Dr. Friedland's paper was discussed at length. This is the myth that there is a flourishing trade (mainly supported by non-natives) throughout East and Central Africa in a drug called in Swahili *mumiani*. It is commonly believed by Africans that Europeans seize unsuspecting Africans, slaughter them—hence an alternative name for the manifestation *chinjachinja* (from *ku-chinja*, Swahili)—process their blood and export the resultant medicine. Fire stations, especially those at Mombasa and Dar es Salaam, are thought to be main depots of the trade, a logical deduction from the red engines, pipes and pumps conspicuously arrayed around any fire station.

Contributions from delegates showed how widespread the myth is in varying forms under different names—*banyama* or *matumbula* in the Mwinilunga District of Northern Rhodesia, (but not in Kabompo or Balovale) where it is believed that victims are carried to the Congo and eaten or canned, (Mr. White); *kabwoka*—the Luapula name—also manifesting itself around Kasama and in the Mambwe area (Mr. Chansa); *bamanyabuta* in Nyakyusa country where the Wilsons encountered it in the 'thirties; *chifwamba* in Nyasaland, where recently an African was convicted for attempting

to sell two well fattened children to a European for his Christmas dinner (Mrs. St. John Wood).

From further afield similar myths appeared to be unconnected with *mumiani* but illustrated how widespread is this type of belief. In Southern Rhodesia *mpakatsini* is a cult which does not in popular belief involve Europeans, (Dr. Holleman), though the *muntu wa mundele*, 'the man with the lamp' of Leopoldville is thought of as a European who catches Africans and eats them (M. d'Hertefeldt); in Madagascar 'the snatcher of hearts' confined his activities to young men (Dr. Biesheuvel).

This interesting catalogue of manifestations showed that the *mumiani* type of myth was sufficiently widespread to be deserving of concentrated study, whilst a subsequent press report (*Sunday Mail*, 13th March, 1960) emphasized Thomas's point 'if men define situations as real, they are real in their consequences'. In the case reported a truck in Nyasaland driven by a European was giving a lift to a number of African children: the driver absentmindedly overshot the agreed stopping place and a boy aged 10 jumped off, believing that he was being abducted as a victim of *chifwamba*; he subsequently died.

A welcome visitor to the Conference was Mr. M. M. Khurana, the Indian Commissioner from Salisbury, who submitted a short note pointing out how the British with their myths in support of imperialism had been forestalled in this field by his own ancestors by two or three thousand years when they established the caste system in India. In defining the uses of the caste system Mr. Khurana considered that it created a stable society, that it encouraged professional specialization and that it enabled the Hindus successfully to resist the onslaught of Islam.

The last paper of the Conference was Dr. Cyril Rogers' on *European Myths about Europeans*, which dealt with certain aspects of his and Professor Frantz's studies of the attitudes of the European population of Southern Rhodesia. Some of the results of this research have been published in the Rhodes-Livingstone Journal, No. 25, 1959, whilst a major work on the subject is currently in the press.

INSTITUTE NOTES

PUBLICATIONS

Communications

A valuable addition to the Communication series, No. 19, will be a work of the late Mr. Peters, who as an Agricultural Officer in the Northern Rhodesian Service contributed to our publications as joint author of Paper 14 on Tonga land usage, and as author of Paper 19, *Land Usage in Serenje District*. Communication No. 19, *Land Usage in Barotseland*, had not been revised for the press when the author died in 1954 and his colleague, Mr. Smyth, has undertaken the necessary editorial work. Professor Gluckman and Mr. Allan have contributed a valuable introduction. Bibliographical details are given below.

Communication No. 20 will contain more of Dr. Bettison's Nyasaland data, covering patterns of income and expenditure of urban and peri-urban African households in Blantyre-Limbe; Mr. P. Rigby has assisted in the write-up of this material. Thereafter we have many works in course of preparation or already available for consideration as communications: a folk history of the Lala, a history of the Kaonde, urban and peri-urban studies from Fort Rosebery, and material on the Okovango of Bechuanaland.

No. 7. *A Selected Bibliography of Rhodesia and Nyasaland*: in place of the second and largely revised edition of this Communication which the Institute planned, it has been decided to pool our work with that of the International African Institute, who will incorporate our material in its forthcoming volume on Central Africa in the *African Bibliography Series* due to be published late 1960 or early 1961.

No. 18. *Crime in Northern Rhodesia*, by W. Clifford. 125 pages, 39 tables, 2 appendices. *Now available*. Price 10s. Postage 9d.

No. 19. *Land Usage in Barotseland*, by D. U. Peters. 60 pages, 2 maps, 1 diagram, 7 tables. *Forthcoming*. Price 7s. Postage 6d.

No. 20. *Patterns of Income and Expenditure in Blantyre-Limbe, Nyasaland*, by D. G. Bettison and P. Rigby. *Forthcoming*.

No. 21. *Fort Rosebery, a Social and Economic Survey of the Township*, by G. Kay. *Forthcoming*.

Papers

The most recent in the paper series is No. 30, Mr. White's study of the Luvale Social Organization: with studies of the Soli, Nsenga and Kaonde which are in process of appearing, the ethnographic gaps in Northern Rhodesia are narrowed to the Lenje, the Lala Bisa

peoples, the Senga and Tumbuka, the societies of the Tanganyika-Nyasa corridor, and the non-Lozi element in Barotseland. Many of the social anthropological studies benefit by being presented in close conjunction with economic analysis, for example, Paper 30 was preceded by one on Luvale economy, and Gluckman's *Economy of the Central Barotse Plain*.

The following papers have been reprinted and are now available at the original prices:

No. 25. *Kin, Caste and Nation among the Rhodesian Ndebele*, by A. J. B. Hughes. **2nd impression.** 7s. 6d.

No. 27. *The Kalela Dance*, by J. Clyde Mitchell. **2nd impression.** 7s. 6d.

Microfiches (obtainable from the Institute only)

Two Studies in African Nutrition, by B. P. Thomson, the out of print Paper No. 24, has now been added to the microfiche series at 5s. plus postage.

Studies on the Plateau Tonga of Northern Rhodesia, by E. Colson, contains: 'Ancestral Spirits and Social Structure among the Plateau Tonga', originally in *International Archives of Ethnography*, Vol. XLVII, Pt. 1, pp. 21-68, Leiden, 1954, and 'Clans and the Joking Relationship among the Plateau Tonga of Northern Rhodesia', from the *Kroeber Anthropological Society Papers* 8 and 9, the Walter B. Cline Memorial Volume, 1953, pp. 45-60. 2 sheet microfiche, price 5s.

With the introduction of 2nd class airmail to America, Australia and elsewhere, one or two microfiche sheets, i.e. $\frac{1}{2}$ oz., cost 1s., three or four sheets, 2s., and so on. The previously announced prices are amended accordingly.

Books

The following are now available:

Seven Tribes of British Central Africa, edited by E. Colson and M. Gluckman. 2nd impression, June 1960. 42s. net.

The Luapula Peoples of Northern Rhodesia, by I. Cunnison. June 1960. 35s. net.

Kariba Studies

Following the decision to build the Kariba dam, the Rhodes-Livingstone Institute, the Rhodes-Livingstone Museum, and the National Museums of Southern Rhodesia took steps to study the effect of the flooding of the area on its people, flora and fauna. Their findings are to be issued as books and as papers which might be collected later into bound volumes.

The first book will be published in September by Manchester University Press on behalf of the Rhodes-Livingstone Institute. By Professor E. Colson, it is called *The Social Organization of the*

Gwembe Tonga, and will cost 35s. net. A prospectus giving full details is being prepared.

FEDERAL SCIENCE CONGRESS

A milestone in the cultural development of Central Africa was marked by the holding of the First Federal Science Congress at the University College at Salisbury from 18th-22nd May 1960. The Congress was divided into three sections; the Physical, the Biological, and the Social Sciences.

The Institute was well represented in the last named section where Dr. Apthorpe read a paper arising from his field work amongst the Nsenga of the Eastern Province of Northern Rhodesia. He drew attention to some problems of tribal political history, explaining how each 'politically locally dominant' clan attempted to boost its ego by exaggerating its past glories. This presented the historian with a considerable task of research and analysis, so that historical accounts could be reduced to their correct proportions.

Mr. Fosbrooke gave a paper, entitled *African Agricultural Adaptability*, profusely illustrated by slides showing the various techniques which had evolved locally in Tanganyika to counter deficiencies in the environment, rotational grazing, irrigation, the growing and the manuring of fodder crops, stall feeding, and the use of farmyard manure, anti-erosion measures and many other refinements. Great difficulty was experienced in introducing these very methods to other African peasant economies, but the fact that they could evolve indigenously gave hope that time and patience would make them generally acceptable.

Mr. McEwan read a paper on *The Relation of Knowledge to Action in Social Science*, drawing on his experience as a research officer engaged on the integration of European immigrants into Southern Rhodesian society. In a rapidly changing situation, said Mr. McEwan, social problems were constantly arising which required investigation and detailed analysis. The demands of operational study might sometimes appear to conflict with the requirements of 'pure' research, leading to frequent misunderstanding of the value of one type to sponsors and to workers in the other sphere. This paper considered the relationship between the two and suggested certain ways in which in an evolving society such as found in Central Africa the two approaches might most profitably be integrated.

REVIEW

Land in Southern Rhodesia, By KEN BROWN. With a foreword by Clyde Sanger. The African Bureau (London, 1959). Pp. 32.

THIS brief pamphlet is from the pen of a young Englishman who, after a few years of farming experience in southern Britain, and a short agricultural course at the Surrey Farming Institute, emigrated to Southern Rhodesia. There he served for five and a half years as a Land Development Officer in the Department of Native Agriculture and assisted in the implementation of an ambitious land reform programme within the African areas. He returned to England in 1959 'for private and political reasons' and has resumed farming in Sussex.

The substance of Mr. Brown's essay concerns two pieces of legislation: the Land Apportionment Act (1930, 1941 and subsequent amendments) and the Native Land Husbandry Act (1951). Both these Acts and their ramifications upon Rhodesian society receive his unqualified censure; indeed, his criticisms and ultimate condemnation of the N.L.H.A. assume serious and, in the opinion of the reviewer, unreasonable proportions.

The Land Husbandry Act is designed to remedy a situation in the African-occupied areas of Southern Rhodesia which was fast becoming untenable. Increased pressures of a growing population upon deteriorating resources had led to a perilous condition in the Native Reserves. The perpetuation of traditional systems of land holding and customary cropping techniques had produced chronic erosion and impoverishment of the soil. Corruption of tribal mores regarding the allocation of land by *kraal* (village) heads had led to unfair distribution of available lands for would-be farmers. By 1950, the Reserves were proving incapable of supporting the growing numbers of rural Africans even at subsistence levels and the need for widespread changes in native agriculture and land tenure had become irrefutable.

A Five Year Plan for executing the Native Land Husbandry Act was launched in 1956. Under the Plan, the food-producing capabilities of each Reserve and its optimum usage for crop production and for animal husbandry are assessed as accurately as possible. New cropping measures to increase yields and to rejuvenate the soils are being promoted. Mechanical as well as organic techniques of soil conservation are required of all farmers and the individual allocation of land on an equitable basis is now in government, not tribal, hands. This bold measure is the culmination of much thought given to the problems of native agriculture by many dedicated men, both European and African, who have had years (in some cases a

lifetime) of experience in tropical agriculture and the special conditions of farming in Southern Rhodesia.

Mr. Brown chooses to disregard the contribution of experienced agronomists in planning the changes in African land use which are implicit in the N.L.H.A. He asserts that 'from an agricultural and conservation point of view the Land Husbandry Act is a bad measure'. It promotes the continuous cropping of granite sand soils which, he claims, are quite unsuitable for permanent cultivation. The author informs us that the majority of the African Reserves coincide with areas of poor sandveld soils; these are classed broadly as Class III land, i.e. land where the erosional hazard is so severe that brief periods of cultivation followed by long periods of resting under grass cover (ley farming measures) are absolutely necessary if agriculture is to be practised at all.

After five years of service in the Native Areas, Mr. Brown must be aware that, in reality, there is a wide range of pedological conditions within the African Reserves; soils vary frequently from area to area according to variations in parent material, slope, exposure, drainage and natural vegetation cover. It is naive, if not purely academic, to insist that most of the land within the Reserves should be cropped only on occasion. The practical impossibility of such an ultra-conservation measure on a national scale is not even considered by the writer. The indigenous population of Southern Rhodesia is still largely rural in make-up, and involved inescapably in tilling the soil or in animal husbandry. With the rapid increase in numbers during the last half century, to the point where the African population will probably double itself over the next twenty-three years, it is imperative that more intensive systems of agriculture be adopted.

From the viewpoint of conservation, the necessity for wide-spread, long-term fallowing in the Reserves may also be challenged. In recent years, great emphasis has been placed within the Department of Native Agriculture on extension work aimed at producing satisfactory land use systems to meet the need for perennial cropping. Demonstration plots, fertilizer trials, improved seeds, soil analyses and so forth have shown that, with special procedures and treatments (which are being taught to, and readily adopted by, the new landowners), a number of important food and cash crops can be raised from year to year on the same land without difficulty.

Mr. Brown argues that the bulk of the inhabitants of the Reserves are not ready for, nor capable of adopting, the new techniques necessary for improved farming. A visit to a Native District such as Bikita in Southern Mashonaland, where an experienced, energetic and highly competent Land Development Officer has induced over 70 per cent of the African cultivators to assume improved practices would prove highly salutary to the writer.

Mr. Brown also claims that the Land Husbandry Act does nothing to encourage animal husbandry in the Reserves. 'It is impossible for a keen man to improve his herd.' In truth, dipping programmes,

culling, paddocking of grazing lands to induce correct stocking rates, pasture research and up-grading of indigenous stock are all an integral part of the improvement programme in animal husbandry under the Act. This is not to say that the contemporary difficulties facing stockowners are going to be mastered overnight. But at least a number of sensible and realistic measures have been instituted under the terms of the N.L.H.A.

To support his strongly biased evaluation of the Land Husbandry Act, the writer unfortunately resorts to a distortion of the facts. It is patently untrue to assert, for example, that 'among the European officials administering the Act there is no enthusiasm for it. It is difficult to find a single Land Development Officer who is optimistic about its success'. The reviewer also served as a Land Development Officer in Southern Rhodesia before resuming a teaching career in the United States of America (he is thus suspect in Mr. Brown's eyes as an impressionable and beguiled visitor). Throughout his association with officials of the Native Department, both in administrative posts and in the field, he was greatly impressed with the eagerness and enthusiasm of the majority of the men, both white and African, whose responsibility it was to implement the N.L.H.A. Dissatisfaction was expressed only at the frustrating delays caused by a shortage of trained staff and inadequate financing. The fundamental necessity and ultimate successful outcome of the Five Year Plan was seldom challenged.

Neither is it correct for the author to suggest that over half a million Africans will have virtually no rights of residence in the land of their birth as a result of the Act. Restrictions on the size and numbers of land holdings (as the only practical course for preventing further fractioning of plots) does not imply a compulsory evacuation of the landless from the Reserves. They may continue to live in the villages of their birth, assisting their landowning kinsmen, or they may move to newly-created townships within the Reserves where alternate occupations will be encouraged. Developments elsewhere in the country, in manufacturing, mining and agriculture, will, it is hoped, keep pace with the increasing numbers of young Africans who will seek employment beyond the Native Areas.

Admittedly, the success of the N.L.H.A. depends heavily upon the general economic development of Southern Rhodesia as a whole. The reviewer has urged elsewhere that the development of African Reserves cannot be dealt with *in vacuo*.¹ The problems of native agriculture are merely part of an all-pervasive adjustment to Western society, a process of acculturation which was set irreversibly in motion when the Europeans first arrived in the Colony.

Perhaps the most distressing aspect of Mr. Brown's attack on the Land Husbandry Act is its negative character. At no point in the author's essay are any positive, practical recommendations made as

¹ Barry N. Floyd, 'Changing Patterns of African Land Use in Southern Rhodesia', Doctoral Dissertation (Syracuse University, September, 1959).

to how the problems of native agriculture might be solved in an alternative manner to that proposed by the N.L.H.A.

While his opposition to the Land Apportionment Act has a great deal more merit than his criticisms of the Land Husbandry Act, it is absurd to imply that, simply by throwing open the country to African settlement and demolishing territorial segregation overnight, all the ills of native agriculture would be automatically resolved. Uncontrolled farming in the newly-acquired areas would swiftly induce the same damage and plight brought about by unsupervised farming in the Reserves since 1900.

Mr. Brown's only indication of a possible alternative to the provisions of the N.L.H.A. lies in a few favourable references to the system of native farming (bush-fallowing) which existed before the arrival of European settlers in Rhodesia. Shifting cultivation, he states, is an 'almost perfect' system of land use for sandveld soils. Prior to the Occupation, and under shifting cultivation techniques, the Africans had abundant land and 'the erosion they caused was negligible and the soil maintained its fertility and structure'.

While this crude system of extensive cultivation may have been well suited to the primitive techniques and numbers of the pre-European societies, the utter impracticability of reviving rudimentary shifting cultivation as the chief means of supporting the contemporary mass of the African people should be evident to all. At its best, the system supported some 20 people per square mile. On this basis, the present African population of approximately 2,500,000 would require 125,000 square miles (more than all the usable land in the entire country). Being subsistence by nature, no surplus crops would be available for cash exchange and the acquiring of much-sought-after material possessions. This is no basis for an emerging society and the economic and political advancements for which the Africans are clamouring.

To extol the ways of the past and to promote their return, the writer even resorts to criticizing the Europeans for having come to Rhodesia in the first place; he points out almost wistfully that 'the huge increase in the African population . . . would not have occurred had there been no European occupation'.

As indicated above, the reviewer is much more in sympathy with Mr. Brown's evaluation of the Land Apportionment Act. Many observers of the Rhodesian scene are agreed that, under the rapidly changing political, social and moral conditions in Africa and the world, the present division of the country is completely indefensible. The serious imbalance in the division of the land between the 193,000 Europeans and 2,350,000 Africans (Population Estimate 1957) stands out clearly in the table on the facing page.

This unjust alienation of land has a stranglehold on the Colony which is inhibiting its natural development and the formation (under the much-publicized political concept of partnership) of a genuine *esprit d'état* to be shared by all citizens.

TABLE I

Land Apportionment in Southern Rhodesia, 1958

<i>Category</i>	<i>Square Miles</i>	<i>Acres</i>	<i>% of Country</i>
European Area	81,230	51,987,000	53.5
Native Reserve	32,844	21,020,000	21.5
Special Native Area	20,122	12,878,000	13.0
Native Purchase Area	12,580	8,052,000	8.0
Forest Area	4,984	3,190,000	3.5
Undetermined Area	89	57,000	0.5
Total	151,849	97,184,000	100.0
Total for African Use	65,546	41,950,000	42.5
Total African Area to which N.L.H.A. is being applied	52,966	33,898,000	34.5

A policy of land apportionment which safeguards sectional interests and perpetuates significant differences in standards of living is the antithesis of those national policies which are avowedly aimed at elevating the indigenous inhabitants of the country to a more worthwhile, productive and satisfactory way of life.

It is earnestly recognized that it will be no simple task to eliminate the idea of security based on land apportionment, fostered over the years and for so long generally accepted, and to replace it by the conception that greater security rests in a genuine effort to work towards a real partnership of races, based on opportunities for advancement in all realms of human endeavour and in all geographic situations. Pursuing a true policy of partnership must mean an honest interpretation of Cecil Rhodes' dictum: 'equal rights for all civilized men', as well as offering the native peoples an opportunity to become civilized. One can only hope that, for the sake of the future, Southern Rhodesia will find her way clear to emulate Kenya, and initiate a widespread reform of land apportionment policies.

To sum up. For anyone wishing to gain an informed and balanced picture of the complexities of African farming in Southern Rhodesia, and the efforts being made to resolve the many problems, it will be necessary to read far beyond this slender pamphlet *Land in Southern Rhodesia*. No one could claim that the N.L.H.A. is an outright panacea for all the ills of the African rural economy. But there are many who confidently believe that it is, at least, a stabilizing Act, creating a solid foundation upon which it will be possible to build a progressive agricultural community achieving greater productivity in crops and animal husbandry at little expense of natural resources, and eventually leading to improved material and cultural levels of living. As for territorial segregation, the reviewer cannot subscribe

to Mr. Brown's demand for immediate abolition of the Land Apportionment Act. He would agree, however, that the land reservation policies of the country require urgent re-examination with a view to the progressive removal of those land barriers which are impeding the future prosperity and security of all peoples in Southern Rhodesia.

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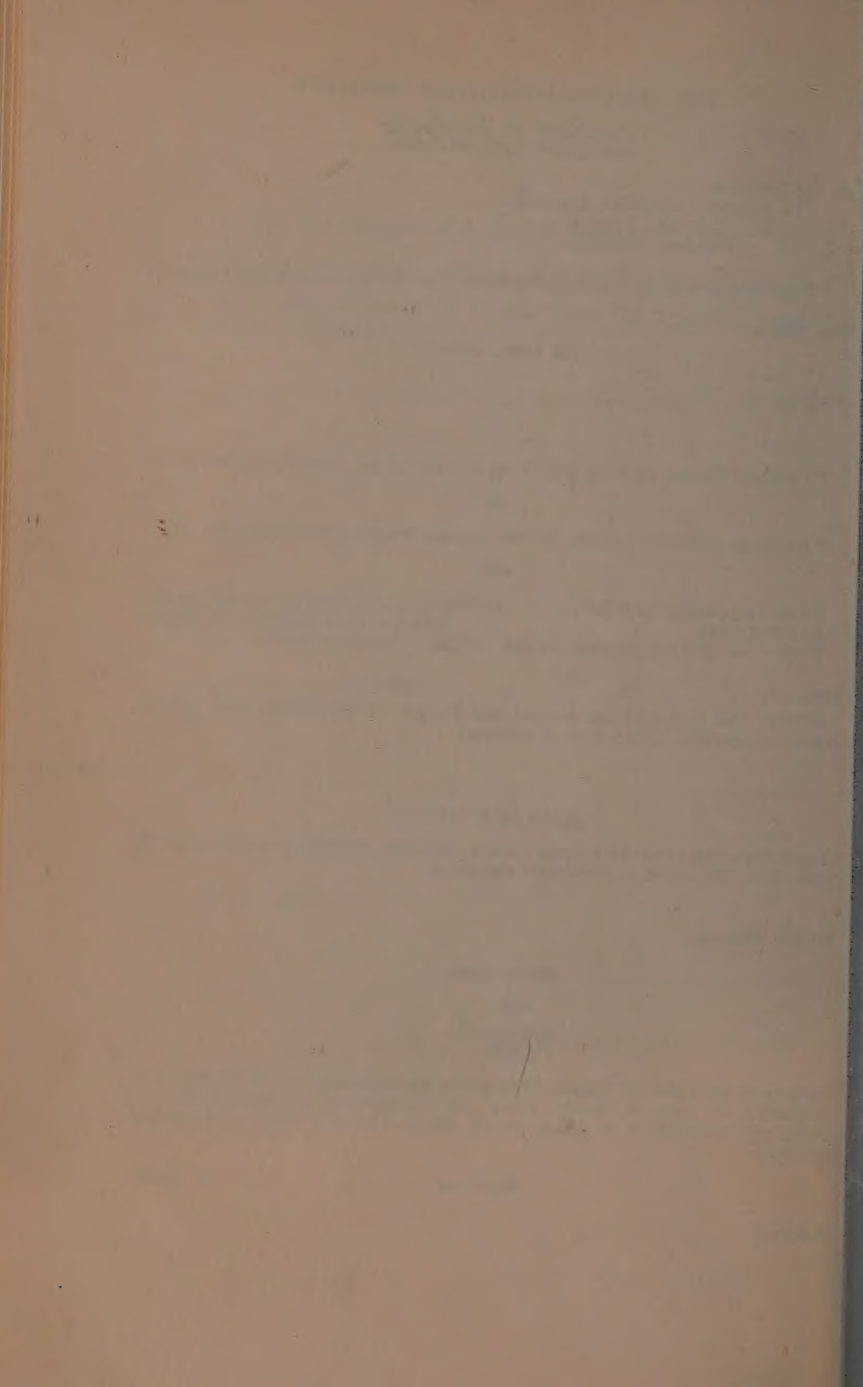
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